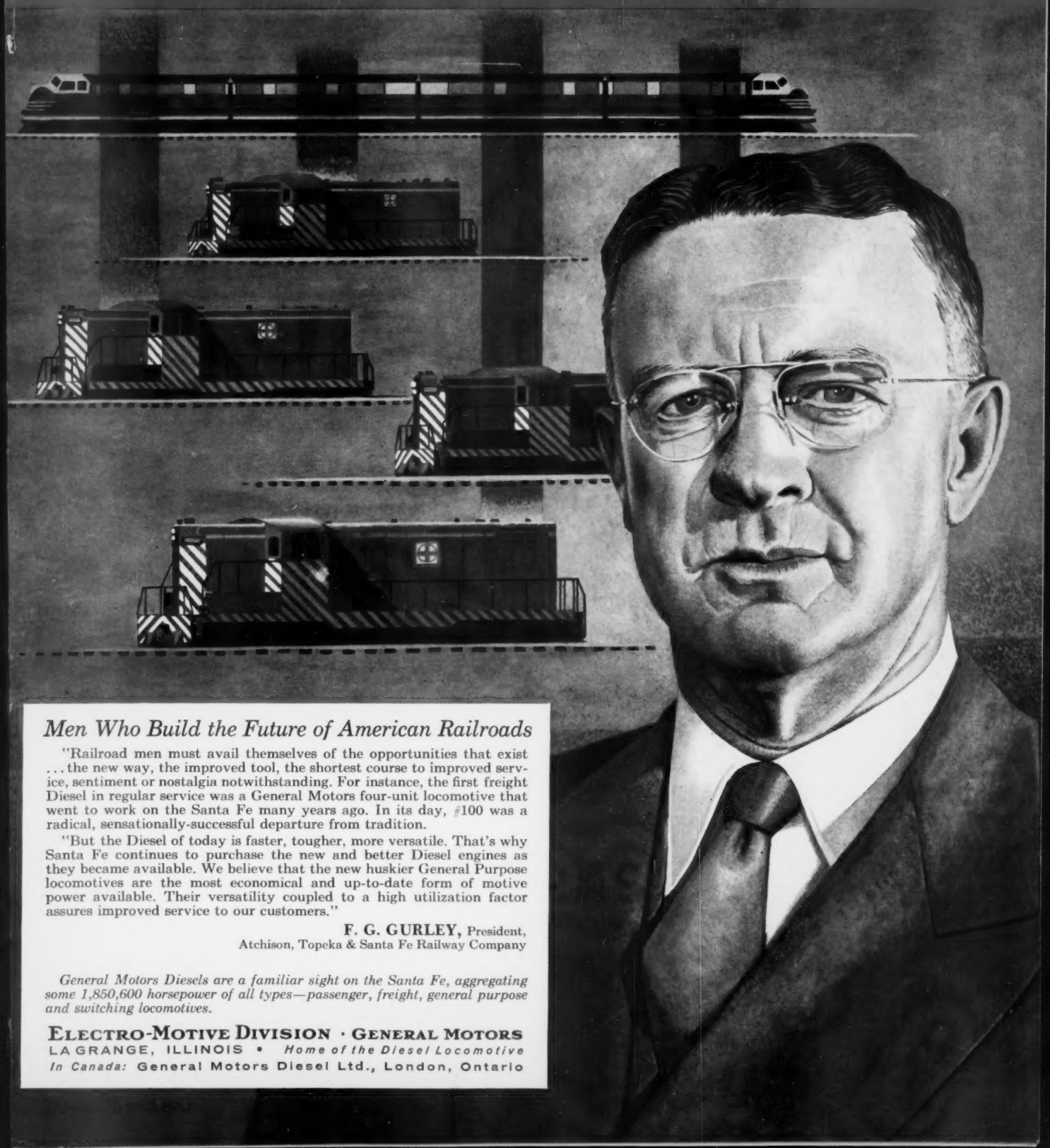
New Era
Dawns in RR Electronics—p. 9

Now Infrared Speeds Car Thawing . . . p. 32

RAILWAY AGE

MAR. 4, 1957 • THE INDUSTRY'S NEWSWEEKLY



Men Who Build the Future of American Railroads

"Railroad men must avail themselves of the opportunities that exist . . . the new way, the improved tool, the shortest course to improved service, sentiment or nostalgia notwithstanding. For instance, the first freight Diesel in regular service was a General Motors four-unit locomotive that went to work on the Santa Fe many years ago. In its day, #100 was a radical, sensationally-successful departure from tradition.

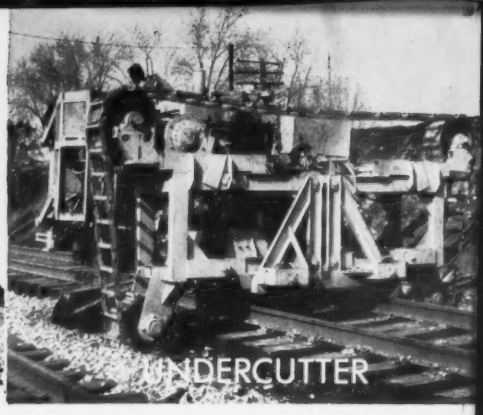
"But the Diesel of today is faster, tougher, more versatile. That's why Santa Fe continues to purchase the new and better Diesel engines as they became available. We believe that the new huskier General Purpose locomotives are the most economical and up-to-date form of motive power available. Their versatility coupled to a high utilization factor assures improved service to our customers."

F. G. GURLEY, President,
Atchison, Topeka & Santa Fe Railway Company

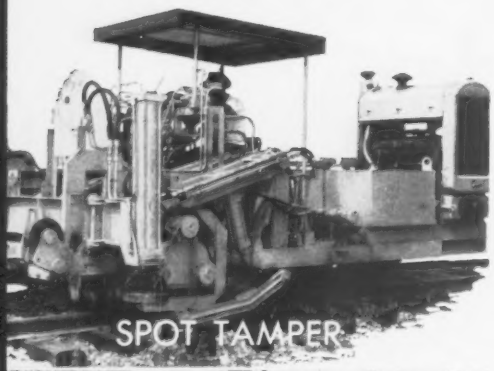
General Motors Diesels are a familiar sight on the Santa Fe, aggregating some 1,850,600 horsepower of all types—passenger, freight, general purpose and switching locomotives.

ELECTRO-MOTIVE DIVISION · GENERAL MOTORS
LA GRANGE, ILLINOIS • *Home of the Diesel Locomotive*
In Canada: General Motors Diesel Ltd., London, Ontario

BALLAST REGULATOR



UNDERCUTTER



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TWO-WHEEL KRIBBER

BALLAST CLEANER

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...First *in the Railway Maintenance Field!*

Whether it be individual performance or work in various maintenance packages, the Kershaw line of trackwork equipment truly is first in the railway maintenance field.

Why? Because Kershaw machines are designed, developed and tested on America's railroads. They have proven themselves by doing the job America's railroads want done. And at a tremendous savings, too!

For a free demonstration of Kershaw equipment on your railroad under your operating conditions, write Kershaw Manufacturing Company or contact a Kershaw sales representative. We'll be happy to arrange it

Now... more than ever . *Recognize This Symbol of Leadership*...

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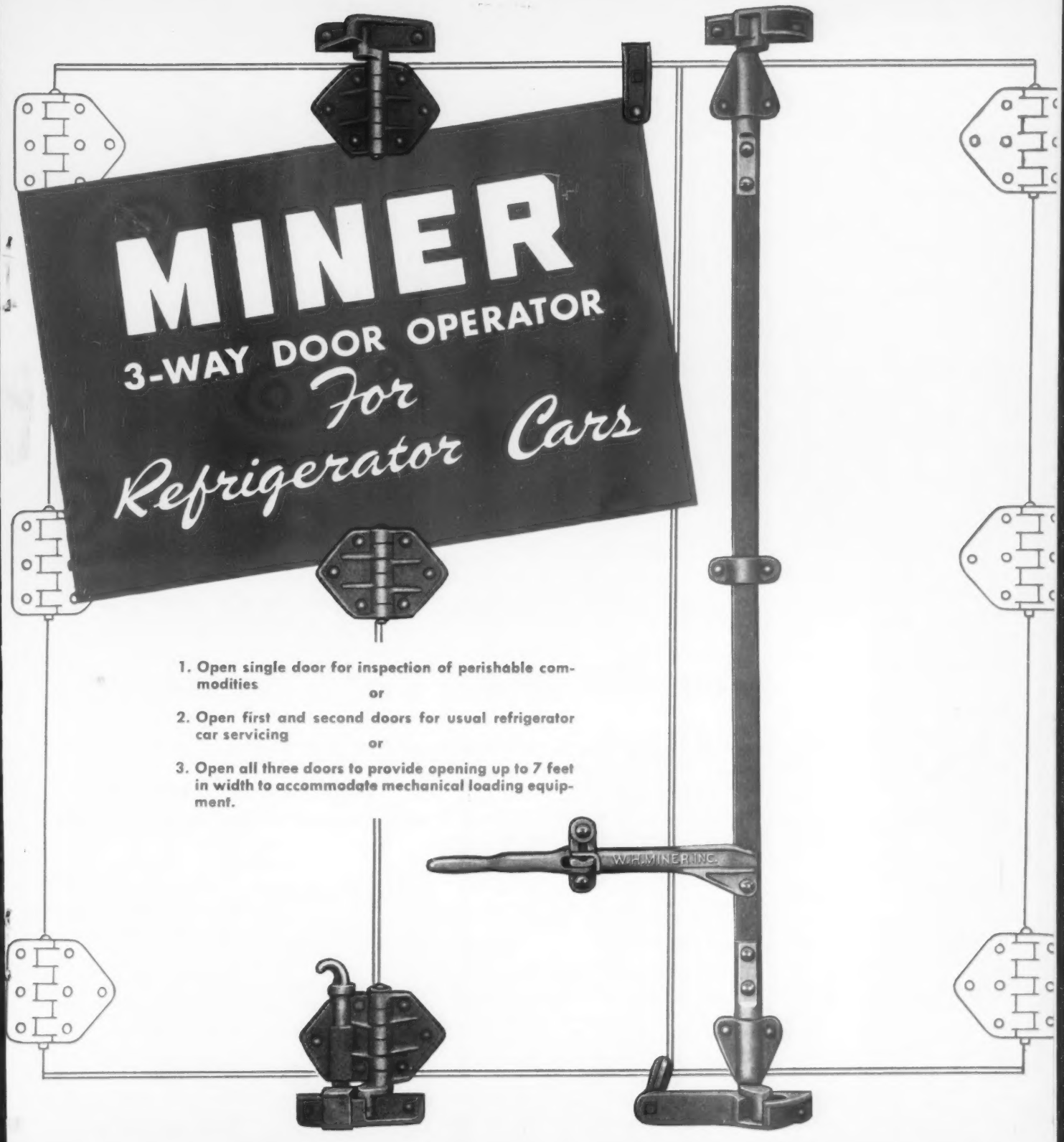
P. O. Box 510 **Montgomery, Alabama**

MINER

3-WAY DOOR OPERATOR

For Refrigerator Cars



1. Open single door for inspection of perishable commodities

or

2. Open first and second doors for usual refrigerator car servicing

or

3. Open all three doors to provide opening up to 7 feet in width to accommodate mechanical loading equipment.

All doors are substantially supported. No tracks or floating fixtures to be serviced. All insulation tightly sealed by door keepers and hinges. Inside faces of all doors may be cleaned from loading platform with doors in opened position.

W. H. MINER, INC. CHICAGO

with UNION AUTOMATIC Classification Yard Systems

The "cushioned coupling" you get with UNION'S new VELAC* automatic control assures reduced impact damage. This equipment determines car weight, rollability and track fullness. Then, taking into account the route resistance, an electronic computer calculates proper release speed, and car retarder pressures are regulated automatically so that cars will couple at just the right speed.

The UNION fully automatic system, including a programmed switching system, permits classification of an entire train with the push of a single button. Some railroads have found they can classify cars in approximately half the time compared to older non-automatic methods. Let us send you complete information on UNION Automatic Classification Yard Systems.

*Trademark

UNION Car Retarder Installations with Automatic or Semi-Automatic Features

IN SERVICE

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Bensenville Yard, Bensenville, Illinois
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ILLINOIS CENTRAL
Markham Yard, Markham, Illinois

L. & N.
Radnor Yard, Nashville, Tennessee

UNION
Mon. Southern Yard, Duquesne, Pa.

N. & W.
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W.B. Argentine Yard, Argentine, Kansas

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P.R.R.
Eastward Conway Yard, Conway, Pa.

SOUTHERN PACIFIC
Eugene, Oregon

UNDER CONSTRUCTION

C.B. & Q.
Cicero Yard, Chicago, Ill.

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Westward Conway Yard, Conway, Pa.

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RAILWAY AGE The Industry's Newsweekly

Vol. 142, No. 9
March 4, 1957

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CONTENTS and Week at a Glance

'Giant brains' and their little brothers ..... p. 9

are coming into their own on the railroads. Used now mainly for statistical and accounting purposes, their biggest jobs will be in day-to-day operations and long range planning.

How infrared speeds car thawing p.32

Fuel costs have been cut about 40% and the car dumping rate has almost doubled since installation of gas-fired, infrared generators, reports the Toledo Lakefront Dock. Even more savings are in prospect through use of natural gas.

Is space available? TV tells you p.35

Satisfied customers and up-to-the-minute data on available space are the aims of the new ticket sales and service bureau just opened in New York City's Pennsylvania Station.

Big 'lift' for a small railroad p.36

The world's longest vertical lift span, costing about $8 million, will be placed in service by the Staten Island Rapid Transit in 1959.

Where CTC cuts down trackage p.38

Objective of the New York Central's huge, 8-year CTC program, which will cover 3,665 miles and cost about $43 million, is to save money. The program, biggest in the industry, calls for taking up long stretches of main track.

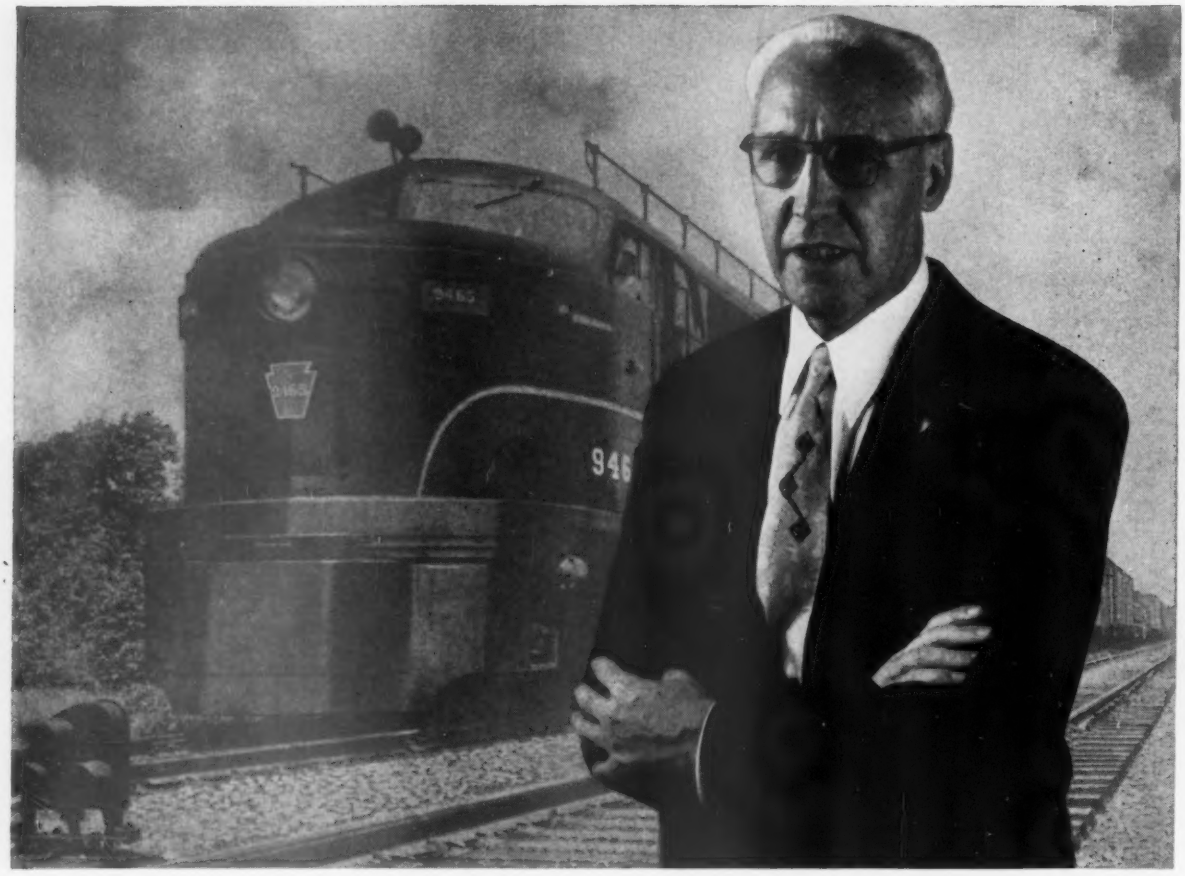
The Action Page—Mr. Genet trots out a spook .. p.46

Although the head of the Greyhound Bus System is an able strategist, his current campaign to scare railroads out of the passenger business indicates he has underestimated the intelligence and stamina of his former colleagues.

SHORT AND SIGNIFICANT

"Mandatory" date for journal lubricators . . .

The effective dates for mandatory use of journal lubricators



"Bell System private line telephone helps us control 1400 road power units from one point"

—Connie Haywood, motive power director of The Pennsylvania Railroad Company

The Pennsylvania's motive power is controlled from one point—by telephone. Bell System private line service permits the Philadelphia bureau to direct road power units efficiently through the vast system day and night.

"We've greatly improved the idle engine problem by centralizing control in Philadelphia," says Connie Haywood, director of The Pennsylvania's motive power control bureau. "And our new system is fast because practically all programming is done through private line telephones. Direct contact in this business is a definite requirement."

This Bell System service proved so successful on the programming of diesels that it was extended to steam and electric unit control. The Philadelphia bureau directs 1400 road power units to where they're needed 24 hours a day.

• • •

Bell System service can work for you as it does for The Pennsylvania. Call your Bell Telephone representative. He will be glad to arrange a study of your communication needs.

BELL TELEPHONE SYSTEM

Private Line Telephone • Private Line Teletypewriter
Channels for: Data Transmission • Remote Metering and Control • Telephotograph • Closed Circuit TV

Current Statistics

Operating revenues, twelve months	
1956	$10,550,936,013
1955	10,106,761,916
Operating expenses, twelve months	
1956	$8,108,273,368
1955	7,641,369,403
Taxes, twelve months	
1956	$1,121,323,051
1955	1,081,420,746
Net railway operating income, twelve months	
1956	$1,068,343,682
1955	1,128,867,391
Net income, estimated, twelve months	
1956	$874,000,000
1955	915,000,000
Average price 20 railroad stocks	
February 26, 1957	88.65
February 28, 1956	98.06
Carloadings revenue freight	
Seven weeks, 1957	4,554,488
Seven weeks, 1956	4,776,409
Average daily freight car surplus	
Wk. ended Feb. 23, 1957	6,324
Wk. ended Feb. 25, 1956	4,459
Average daily freight car shortage	
Wk. ended Feb. 23, 1957	2,403
Wk. ended Feb. 25, 1956	3,607
Freight cars on order	
February 1, 1957	114,656
February 1, 1956	144,946
Freight cars delivered	
One month, 1957	7,822
One month, 1956	4,199
Average number railroad employees	
Mid-January 1957	996,105
Mid-January 1956	1,045,815

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Week at a Glance CONTINUED

(Aug. 1) and for banning cast-iron wheels (Jan. 1, 1958) remain unchanged this week in the face of a flurry of excitement over possible postponement. Railway Age reported (Feb. 18, p. 7) that the present effective dates "may be postponed," on the basis of a statement before a railroad group by a responsible individual. Last week a spokesman for the AAR Mechanical Division in Chicago said there is "no official basis" for that statement. No official action has been taken or is immediately contemplated.

First coast-to-coast TOFC shipment . . .

was originated at New York March 1, with Lackawanna, Wabash and Santa Fe participating in movement of printing press to San Francisco. Filing of original transcontinental piggyback rates was reported in this column Oct. 29, 1956.

Payroll by 'Univac' . . .

starts on the Chesapeake & Ohio this month. It's the latest development with this road's "giant brain." Among other jobs in the offing is one by which road maintenance forces will be alerted in advance as to where rail should be replaced.

A new AAR vice-president . . .

will be appointed to take charge of legislative activities. Those activities have heretofore been under the jurisdiction of the association's Law Department.

Budd's 'Pioneer III' . . .

"may well be" what the Rock Island will specify when it goes after new equipment, possibly for Minneapolis-Houston service, in two or three years, President Downing B. Jenks believes. The 85-ft light-weight coach was demonstrated for rail officers on the Rock Island last week.

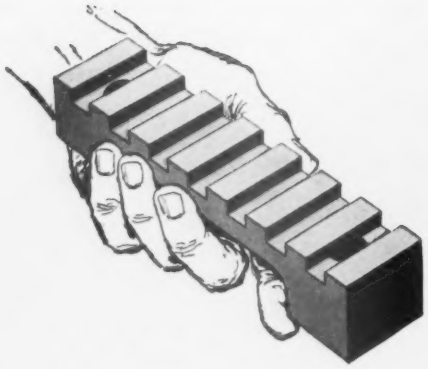
The Cabinet Committee's transport program . . .

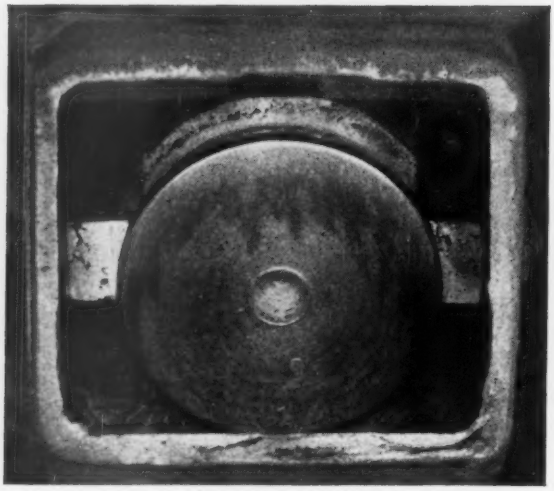
was scheduled to go to Congress last week. The Department of Commerce was expected to submit the proposals in a new bill not substantially different from that which died last year.

Merger plans . . .

of the Milwaukee and the Chicago & North Western "are dead," says C&NW Chairman Ben W. Heineman. J. P. Kiley, Milwaukee president, concurs.

Improve the efficiency of any journal lubricator with Magnus R-S JOURNAL STOPS





Here's proof of Journal Stops' unique ability to hold packing in place even under extreme service conditions. This unretouched photograph shows the interior of a Journal-Stop-equipped box after undergoing an 11½ mph flat-switching impact test. Waste is still firmly seated under the journal.

Longer bearing life and lower maintenance costs for trucks and journal boxes also yield big return on initial R-S Journal Stop investment

WITH conventional waste packing and Magnus R-S Journal Stops, you can run freight cars for *three years* between periodic servicing. That's been established by test experience to date.

Bolted to both sides of the journal box, the bronze bearing-metal Journal Stops form a permanent, built-in waste "container" that holds the mass of packing right where it belongs, even under severe braking and impact forces. And, unlike any other waste container or retainer, by keeping the bearing on the journal, you prevent short strands from being trapped beneath the bearing crown. By restricting fore-and-aft movement of the journal within the box, they prevent squashed-down waste packs, maintain constant journal-to-packing pressures, assure a uniform feed of oil to the bearing and *eliminate danger of waste grabs.*

But that's not all. You also get longer bearing life and freedom from spread linings. You reduce the requirements for an effective box rear seal and increase the efficiency and service life of present dust guards and seals. That's vital to the successful operation of most waste substitutes.

Pad and mechanical lubricators benefit too. By keeping the journal in its proper position, you keep the box from rising during impacts and braking — don't crush the lubricator or seal. Axle dust guard seats can't be scored either.

WHAT ABOUT COST? One private car line estimates it has recovered more than 90% of the total cost of Stops and installation in just the first 20 months of operation. Other roads report comparable savings. R-S Journal Stops not only pay for themselves in reduced maintenance costs. They get cars to destination with trouble-free journal boxes. Write for complete information. Magnus Metal Corporation, 111 Broadway, New York 6 or 80 E. Jackson Blvd., Chicago 4.

MAGNUS

Solid Bearings

MAGNUS METAL CORPORATION

Subsidiary of **NATIONAL LEAD COMPANY**

RAILWAY AGE
The Industry's Newsweekly

THRESHOLD OF THE 'IMPOSSIBLE' . . .

Electronics Plots Railroad Course

Two weeks ago 32 of railroading's top men in the wizardry of electronic business and computing machines assembled at Poughkeepsie, N.Y. Guests of the International Business Machines Corporation, they swapped notes on the programs, progress and plans of the 18 roads they represented.

They dipped deeply into a seemingly bottomless well for a sample of the newly conceived "black box" devices envisioned for the future.

On hand for the unique weeklong seminar were men from the Bessemer & Lake Erie; Burlington; Chicago & North Western; Erie; Frisco; Lackawanna; New Haven; New York Central; Nickel Plate; Pennsylvania; Reading; Rio Grande; Rock Island; Santa Fe; Seaboard Air Line; Soo Line; Southern and Southern Pacific.

"You are on the threshold of developments you wouldn't have thought possible five years ago," they were told by J. A. Rhaesa, IBM transportation special representative.

Impetus for that first big step across the doorsill, according to IBM Vice-President W. J. Mair, may be the replacement of the commonplace vacuum tube with high-quality transistors. Economical production of this device, he said, might produce "a profound change" in the whole field. Transistor-using computers have been developed but production costs are reported so high they are almost unmarketable now.

IBM's role in the widening use of high speed data-processing machines is a major one, but this company is not alone. Recent developments have been marketed by such companies as Western Union, Underwood and Remington Rand, as they and other firms push research projects to meet the demands of industries where fast communications and faster translation of mass data into useful material are priceless.

Even as the IBM seminar went on, developments on several railroads proceeded unabated. The Canadian Pacific was making final tests on its new IBM "705" computer center at Montreal, and the Southern was still in the early stages of using a similar facility.

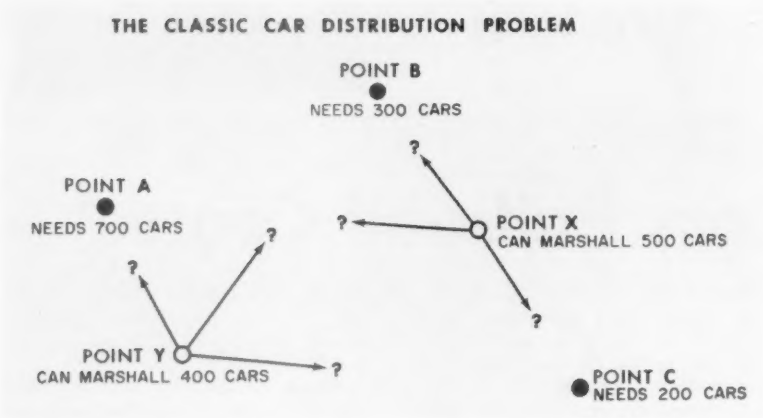
The Great Northern, meanwhile, was setting up a Remington Rand "Univac" at St. Paul—this being a modified version of one already in use on the Chesapeake & Ohio.

At Cleveland, the question being asked by C&O officers was how long they could get along without acquiring a second "giant brain," so vast are the possibilities they envision for the unit they now have.

The accent is on speed in all cases, with reels of tape replacing stacks of familiar punch cards, and computers'

CLASSWORK during IBM seminar was split up between lectures by IBM personnel on latest and potential applications of electronic data processing equipment and talks by railroad men on how they are using computers to solve specific problems. Here C. G. Thompson, IBM transportation department manager, discusses company's products.

HOMEWORK usually consisted of informal group discussions. Here are (left to right), R. J. Henderlong, New York Central chief system analyst; Karl Byham of Southern's controller's staff; E. W. Weir, auditor, electronic procedures, Rock Island; E. H. Rigg, assistant methods engineer, Pennsylvania; C. C. Cather, research supervisor, Southern Pacific; and Earl Peak, assistant to general manager, Frisco.



COMPUTER POTENTIAL is illustrated here. Programs have been set up to advise dispatchers which cars to send where—establishing priorities on need, desired service and business principles. Problems solved can be vastly more complex than the one shown in the chart.

"memories" getting bigger and bigger.

Right now, for the most part, these giant computers and their smaller counterparts are used to process payrolls, provide statistical breakdowns for analysis of business patterns, prepare reports, and do accounting work.

That's page one of the data-processing story.

Page two is apt to be in the area of providing data for minute-to-minute use. In car allocation, for example, a centrally located officer would be able to weigh cars needed against cars available and dispatch them and their train and engine crews to give the best service and get the most profitable operation for his railroad.

Page three—and this could conceivably be reached in the 1960s—is expected to be the use of more refined devices to project such patterns as cars needed tomorrow or next week or a month from now.

They might forecast inventory requirements, or be used to schedule track and shop maintenance work, or new car building. Data now compiled or stored in computers would be scanned continuously to aid in planning operational and business moves.

More potent, perhaps, is the ability of the computers—which tell aircraft builders whether a plane of design "X" will fly before it's off the drawing boards—to simulate operating conditions. Thus, the railroad officer would have the chance to "test" an operation before putting it into practice.

Still, computers have two general limitations: they do only what is asked of them (or act only on data "fed" to them) and they serve only to advise. Mortal minds still must make the decisions.

As one railroader set up the problem: "What do you do when the computer says to send all your available freight cars to one place and the president says to send them someplace else?" "Compromise," was the lecturer's advice—and do what the boss says.

The railroad men assembled at Poughkeepsie were unanimous in their praise of such a free exchange of information. If there was a single prevailing attitude, it was recognition of how much railroads have to learn about the use of computers—and how much they can profit from learning. On top of this, as one man said, "we're better off working together this way than with each one trying to do the thing on his own and in his own way."

Moore Sees Trend to Public Aid for RRs

"Experts who have faced the rail commutation problem realistically" agree that any solution to it must involve some sort of public aid.

So said E. T. Moore, president of the Jersey Central Lines, at a meeting of the Roseville [N.J.] Lions Club. Mr. Moore, adding that he already detected a trend toward such public aid, cited recent decisions of various authorities to make substantial tax or other concessions, in the interest of continued operations, to the Hudson & Manhattan, the Long Island and the Staten Island Rapid Transit.

Major factor in creating the railroads' current need for some form of public aid, Mr. Moore said, are publicly subsidized highway systems which have brought about basic change in travel patterns—a shift from rail to rubber. "The choice now is not that of keeping what rail commuter service we have or getting something better. Unless a fresh viewpoint is adopted, we can expect commuter fares to go up and, what is worse, a deterioration of commuter service at an accelerated rate. The only alternative that I can see is increasing acceptance of commuter service as a public responsibility, with full recognition of the tremendous stake that any community has in reliable transportation."

"Idle time and exorbitant New Jersey railroad taxes" are the primary reason commuter transportation cannot be made to pay, at least in the area served by his company, Mr. Moore added. "Despite the fact that we make every possible use of our expensive diesel locomotives in both freight and passenger service," he said, "our engines are idle 65% of the time. Our passenger coaches are idle 83% of the time, and we have no use for our ferryboats 54% of the time. Fifty-nine per cent of wages paid to passenger-train employees represents time paid for so the men will be available for peak hours."

January Car Installations Largest in 3-1/3 Years

Class I railroads and their car line affiliates installed more new freight cars in January than in any previous month since October 1953. The January total was 7,568 cars.

This was reported by Chairman A. H. Gass of the Car Service Division, Association of American Railroads, in his latest review of "The National Transportation Situation."

Serviceable Fleet—He also reported that serviceable fleets of the Class I roads increased by 1,411 cars during January. And these fleets on February 1 included 20,804 more cars than they did a year earlier.

Class I roads retired 3,165 cars in January, so their net gain in ownership for the month was 4,159 cars. Meanwhile, the bad-order backlog was up some 2,750 cars. Mr. Gass explained that this is not unusual for February, when winter weather normally hampers operation of outdoor repair facilities.

Detention reports for January indicated that 22.24% of the cars placed in that month were detained beyond the free time. That compared with 20.76% for the previous month and 20.94% for January 1956.

Performance data showed that freight cars produced an average of 1,030 net ton-miles per serviceable car per day in November, the latest month for which figures were available. That was below October's 1,095, but slightly above November 1955's 1,028.

New England, Southern Fare Hikes Make it Unanimous

The 1957 increases in passenger fares have become nationwide in scope. This resulted from the Interstate Commerce Commission's recent decision not to suspend tariffs making the 5% hikes effective in New England on February 17 and in Southern territory on February 20.

The increases apply to both coach and first-class fares. Western railroads and eight Official-territory lines made them effective January 1, and they became effective early last month on other Official-territory roads. Charges for Pullman space were increased 7%, effective January 1 (Railway Age, Jan. 7, p. 14, and Feb. 4, p. 11).

The commission's decision not to suspend the New England and Southern-territory tariffs was embodied in an order which said no protests had been filed against the schedules.

Direct Interchange Begun By C&EI, Rock Island

Direct interchange of freight cars, by-passing routes which include various belt lines, has been started in Chicago by the Rock Island and the Chicago & Eastern Illinois.

H. R. Sampson, C&EI traffic vice-president, announced that the direct transfer at a 91st Street track is expected to save up to 1½ days' time in transit. Each road will make five deliveries daily.

B&O's Aim: 'To Keep On Selling Tickets'

"The Baltimore & Ohio sold the very first railroad ticket to a passenger for the sum of 12 cents. And we will continue to sell tickets to passengers —come hell or high water—even if the utterly fantastic and impossible situation should be reached that we should be not only the first, but the last!"

B&O President Howard E. Simpson used his view on passenger service to make a point: That railroads have a "mighty and logical" place in our fast-moving civilization. They have, he said, a responsibility to occupy that place without retreating from their past standards of service and performance.

Speaking before the New York Traffic Club on February 21, Mr. Simpson said the big need in industry and transportation today is greater self-discipline and individual responsibility. He said there is danger in stressing too much the rights and privileges of the individual without parallel stress on individual responsibility.

Chesapeake & Ohio Acquires a Second Plane

A twin-engine, five-passenger executive airplane (above), has been acquired by the Chesapeake & Ohio for use by transportation, mechanical and engineering personnel in inspecting and supervising activities. The C&O has had a two-engine DC-3 "flying office car" in service since July 1955. Capital Airlines operates both planes for the railroad.

Stanford Gets Transport Research Job

A $324,000 research contract to develop a system for planning and controlling transportation movements has been awarded to Stanford University. The system, for overseas use by the U.S. Army, will cover railroad, highway, pipeline and marine transportation. Allowance is to be made for possible inclusion of air transport.

The contract, awarded by the Transportation Research and Engineering command of the Army Transportation Corps, also calls for the university to recommend electronic data-processing equipment for use in the system. The project will be managed by the university's School of Business. Gayton E. Germane, associate professor of transportation, is the director.

Commercial applications of the research appear to be far-reaching, Mr. Germane said, and the army has agreed that the university may publish all unclassified results. Final report is to be submitted in June.

The project is divided among three teams: Transportation movements; computer systems; and operations research. Several major transportation companies using electronic data processing, the university said, have indicated their willingness to cooperate.

Geoffrey Bruere, on leave from his position as executive assistant to the president of the Chicago & North Western, is assistant leader of the transportation movements team, which is headed by Mr. Germane.

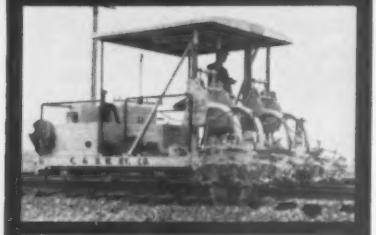
Is There a TOFC Future in Dixie?

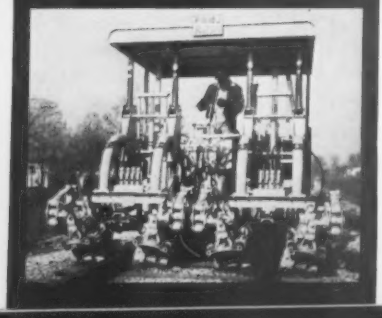
The question whether piggybacking can be made to "go" in the south has been raised by R. H. Smith, president of the Norfolk & Western.

Addressing the New York Society of Security Analysts recently, Mr. Smith said he was forced to admit "I'm not one of the great enthusiasts on piggybacking."

Participation with the Pennsylvania and other railroads in the Trailer-Train Company trailer - on - flat - car service has produced for the N&W discouraging results, he said.

He said his road's TOFC operations have been on a relatively minor scale and that the N&W has been (*Continued on page 15*)





The JACKSON TRACK MAINTAINER

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Unmistakable proof of this fact is found in the almost universal acceptance of this machine by America's leading railroads. To make sure your track maintenance dollars do maximum duty, get the complete facts concerning the Jackson before making any commitments. The evidence of its superiority is so outstanding we are confident you'll specify no other.

Acquirement plans to meet your needs

JACKSON VIBRATORS, INC.

LUDINGTON, MICHIGAN

MARKET OUTLOOK THIS WEEK

Carloadings Off 7.3% in Week

Loadings of revenue freight in the week ended February 23 totaled 626,636 cars, the Association of American Railroads announced on February 28. This was a decrease of 49,330 cars, or 7.3%, under the previous week; a decrease of 60,382 cars, or 8.8%, compared with the corresponding week last year; and a decrease of 4,436 cars, or 0.7%, compared with the equivalent 1955 week.

Loadings of revenue freight for the week ended February 16 totaled 675,966 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS

For the week ended Saturday, February 16

District	1957	1956	1955
Eastern	114,407	119,268	113,367
Alleghany	131,401	141,606	121,716
Pocahontas	59,182	61,283	50,767
Southern	129,551	131,802	124,106
Northwestern	73,739	73,842	72,464
Central Western	115,113	115,744	111,573
Southwestern	53,573	54,774	56,255
Total Western Districts	241,425	244,360	240,292
Total All Roads	675,966	698,319	650,243
Commodities:			
Grain and grain products	52,138	46,914	46,104
Livestock	5,616	6,228	6,181
Coal	132,973	140,146	126,055
Coke	13,830	13,721	10,507
Forest Products	42,943	45,237	42,915
Ore	22,959	21,445	13,772
Merchandise l.c.l.	56,194	61,891	61,963
Miscellaneous	349,313	362,737	342,751
February 16	675,966	698,319	650,248
February 9	665,251	684,328	638,788
February 2	647,972	680,989	635,779
January 26	665,745	691,850	637,116
January 19	657,269	299,286	630,351
Cumulative total, 7 weeks	4,554,488	4,776,409	4,429,467

IN CANADA.—Carloadings for the seven-day period ended February 14 totaled 77,503 cars, compared with 77,182 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
Feb. 14, 1957	77,503	35,643
Feb. 14, 1956	76,621	36,151
Cumulative Totals:		
Feb. 14, 1957	444,623	198,485
Feb. 14, 1956	473,651	218,579

New Equipment

FREIGHT-TRAIN CARS

► *Erie.*—Ordered 100 70-ton covered hopper cars, Greenville Steel Car; cost $1,125,000; delivery scheduled for next July.

► *January Deliveries Highest Since October '53.*—For third successive month, January deliveries of new freight cars were higher than in any month since October 1953, ARCI and AAR report; January deliveries totaled 7,822, compared with 7,260 in December and 4,199 in January 1956 (8,727 cars were delivered in October 1953); new freight cars ordered in January totaled 5,328, compared with 4,992 in December 1956 and 1,818 in January 1956; backlog of cars on order February 1 totaled 114,656, compared with 117,257 on January 1 and 144,946 on order February 1, 1956.

Type	Ordered Jan. '57	Delivered Jan. '57	On Order Feb. 1, '57
Box—Plain	1,751	2,554	34,121
Box—Auto	0	399	1,370
Flat	50	79	4,182
Gondo'a	365	1,457	11,413
Hopper	800	1,997	39,403
Covered Hopper	950	356	8,478
Refrigerator	225	244	4,722
Stock	0	0	0
Tank	1,156	572	8,252
Caboose	25	2	108
Other	6	162	2,607
TOTAL	5,328	7,822	114,656
Car Builders	1,670	4,686	55,548
Company Shops	3,658	3,136	59,108

LOCOMOTIVES

► *Colorado & Wyoming.*—Ordered one 900-hp diesel-electric switching unit, Electro-Motive.

► *117 Units Installed in January.*—Class I railroads placed in service in January 117 new locomotive units (115 diesel-electrics, two electrics), compared with 126 (all diesel-electrics), in January 1956, AAR reports; December 1956 installations totaled 110 (107 diesel-electrics, three electrics); 787 new units were on order for Class I railroads on February 1, including 755 diesel-electrics, 30 gas turbine-electrics and two electrics, compared with 835 units (808 diesel-electrics, 15 gas turbine-electrics, 12 electrics), on order February 1, 1956.

SPECIAL

► *Rock Island.*—Ordered 10 aluminum refrigerator cargo units for its Convert-A-Frate service, ACF Industries, for March delivery.

► *St. Louis Car Co.*—Ordered lightweight electric propulsion equipment from General Electric for 50 rapid transit cars being built for Hudson & Manhattan (Railway Age, Jan. 21, p. 13); approximate cost of equipment is $840,000.

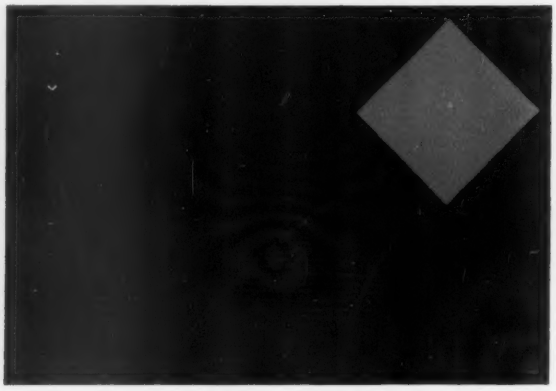
Newest safety signing system... Reflective Train Control

(And how it works to give you low-cost nighttime safety)

The diesel moves at high speed through the night. Any dangers ahead are hidden by darkness. Then the headlamp picks up a dot of green about ½ mile ahead . . . just about where that siding switch comes in. The engineer's concentrated attention is focused on the bright dot ahead.

The dot quickly grows larger. It is the switch target. Its diamond shape and clear green color tell the engineer the switch is right . . . gives him an easy-to-see, go-ahead signal. If the switch had been open, the red side of the sign would have been seen just as easily . . . in time for the alerted engineer to act.

Almost safely past the switch now, the engineer already sees a new dot ahead. This is the Reflective Train Control system, RTC, a 24-hour-a-day signing system of "Scotchlite" Reflective Sheeting. These durable signs (made quickly and economically in a central sign shop) actually pay for themselves in lowered maintenance costs.



The green diamond flashes past. The switch is crossed safely. The fast-moving train moves smoothly ahead. And the bright warning of durable signs of "Scotchlite" Sheeting, reflected in the diesel headlamp, has again proved its value. In any weather, RTC with "Scotchlite" Sheeting gives your road *true* low-cost nighttime safety.

Reflective Train Control can give *your* road improved operational safety and lower sign production and maintenance costs. Write today to: Minnesota Mining & Mfg. Co., Dept. FQ- 347, St. Paul 6, Minnesota, for full details.

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(*Continued from page 11*)
offering the service for less than a year. But, he wondered if his road's experiences did not result from some factor peculiar to the south which made piggybacking in that area impractical.

Certainly, Mr. Smith pointed out, "it seems to work pretty well" in other parts of the country.

Among the "holdouts" from TOFC operations, it might be noted, are the Southern, the Atlantic Coast Line and the Seaboard—all southern carriers. On the other hand, many southern roads are engaged in piggybacking—while some non-participants are in areas where TOFC traffic is generally rated good.

"Dieselization with us is not going to be a hurried process," Mr. Smith stated, turning to another topic. At the same time, he indicated that steam locomotive - building days in the N&W's own shops may finally have come to an end.

Mr. Smith offered two general reasons for this: Diesel locomotive manufacturers have so far been doing "the best job" of converting fuel heat energy to mechanical energy, although coal offers the cheapest source of heat energy; and, manufacture of the special parts used in steam locomotive assembly has virtually ceased, making the cost of building steamers too high.

Nevertheless, Mr. Smith held out the hope that "coal will some day again be used in substantial volume for railroad locomotive fuel"—after a more efficient coal-using engine is perfected.

Electronic Hot Box Detector Is Installed on Reading

An infrared ray system to detect hot boxes has been installed on the New York branch of the Reading. Use by the railroad of thermal relays for experimental remote-control operation of a diesel locomotive to combat motor freezing also has been announced.

"Application of infrared rays to numerous railroad operating problems has tremendous future possibilities," E. Paul Gangewere, Reading vice-president, operation and maintenance, told the recent annual "Rail Nite Dinner" of the Trenton [N.J.] Traffic Club.

The hot-box detector consists of an infrared camera, the lens of which records the temperature of each passing journal. A thermal relay operates to indicate any overheated journal at either the next signal or the first control tower ahead.

US&S Develops Yard Control System

A new automatic classification yard control system has been developed by the Union Switch & Signal Division of Westinghouse Air Brake Company.

The Union Company has been using the Mon Southern yard of the Union, in Pittsburgh, as a laboratory to make studies and tests of new electronic equipment and to determine the basic requirements for a fully automatic system. Under this program, the new system has been installed to provide completely automatic operation for all cars moving through the master retarder and into the center group of classification tracks.

By means of a programmed switching system, track destination information is pre-programmed on tape fed into the system which automatically controls the switches to route each car to its proper classification track.

The new Velac electronic retarder control system controls retarders to an accuracy that averages plus or minus 0.1 mph in the speed at which a car is released. The operator need not manipulate any button or lever, exercising supervisory observation only.

Based on demonstration of the new system in the yard on the Union, orders have been received by Union Switch & Signal for similar equipment to be installed at seven additional yards throughout the country. It is estimated these orders will total almost $7,000,000.

Freas Would Limit Out-of-Pocket Rates

Commissioner Freas, chairman of the ICC's principal rate division, has set out some of his views on competitive rate-making. He said:

- Competitive necessity does not justify reduced rates under all circumstances in which out-of-pocket costs are met. It must be established that the moving carrier is justifiably meeting competition, not creating it.
- When the value of service is equal, the low-cost carrier (fully distributed costs considered) should set the pattern. When the value of service is unequal, an allowance should be made for the difference in service value.
- Below the pattern thus set by the low-cost carrier those with higher costs should not be permitted to go. They should be permitted to meet the low-cost carrier only if they can do so fairly and with substantial benefit to themselves.
- Even a rate returning out-of-pocket costs is not necessarily reasonably compensatory. If it is not required by the needs of commerce or compelled by competitive necessity, it is not reasonably compensatory unless it bears its share of the transportation burden.

Commissioner Freas spoke thus at a recent meeting of the National Motor Freight Traffic Association in Washington, D.C. The title of his address was "The Role of Costs in Ratemaking," and he asserted that it is "no exaggeration" to say "cost finding is now the foundation of transportation pricing."

He had figures showing that in 1956 the commission's Cost Section furnished cost information to its Suspension Board in 2,103 cases involving 10,652 rate changes. That compared with the 472 cases in which costs were furnished in 1949, first full year after the practice was adopted.

Mr. Freas suggested that a "substantial" number of these rate applications could have been eliminated if the carriers had bothered to see whether the rates they proposed would be compensatory. Sometimes a "simple calculation" will indicate that a proposed rate is unreasonably low, he said.

Seeing for Himself

Mr. Justice Roy L. Kellock, of the Supreme Court of Canada and chairman of the Royal Commission that will investigate the dispute between the Canadian Pacific and the Brotherhood of Locomotive Firemen & Enginemen, inspects a diesel locomotive in the CPR's St. Luc hump retarder freight yard. Hearings on the dispute open in Ottawa March 4.

Technical Tidings

Selected from March Railway Monthlies

Interlocking at Clearing yard on the Belt of Chicago features an emergency control by which, if a signal does not clear after its route has been lined, the leverman can "lock up" the plant to flag the train over the route; and trains can use other routes with safety. For details see Railway Signaling & Communications.

•

Interchange rules have been altered because of the growing number of mechanical refrigerator cars, mandatory use of journal lubricators, and the ban on cast iron wheels mentioned in Railway Locomotives & Cars' summary of 1957 Interchange Rules.

•

The CSS&SB, sometimes called "the interurban which became a railroad," has succeeded in large measure by virtue of the shop which maintains its equipment. "The Shop Behind the Railroad" is described in Railway Locomotives & Cars.

•

How to get longer life and improved performance from storage batteries is told in a case history of battery maintenance at a New York Central interlocking. Railway Signaling & Communications describes the maintenance procedures to be followed.

•

Has mechanization of railroad bridge maintenance forces kept up with that of track forces? As told in Railway Track and Structures, bridge men are about evenly divided on this question, but they all agree on one point: bridge forces on many roads are a long way from being fully mechanized.

•

Long locomotive battery life is assured by an adequate battery shop and good maintenance procedure, as set forth in Railway Locomotives & Cars.

•

Mechanization of maintenance-of-way work on most railroads has been a gradual process. On the Missouri-Kansas-Texas, however, the shift from hand methods to complete mechanization was made in a single giant stride. Cost: $500,000. Railway Track and Structures tells how it was done.

Long-Haul RR Runs Boost Auto Rentals

"Greater use of fast train service between distant points" has stimulated the car-rental business, Walter L. Jacobs, president of the Hertz Corporation, said in New York City recently.

Increased overall business in seven key eastern cities has required a 59% expansion of the Hertz car and truck fleets in the last six months, Mr. Hertz reported. He said this involved expenditure by his company of $13 million.

The cities were identified as New York, Boston, Philadelphia, Baltimore, Washington, Newark, N. J., and Hartford, Conn.

Total Hertz vehicle investment in those cities is $34 million, Mr. Hertz said, adding that the number of vehicles in those cities has been upped 59%, to approximately 14,000 vehicles. The total Hertz fleet numbers 41,800 vehicles.

Popularity of long-haul train travel coupled with the growth of airplane traffic and the public's being "addicted to the automobile" were cited by Mr. Hertz as key factors in the expansion of car rentals.

Rails Fined $27,800 in 4 Months

Fines totaling $27,800, plus costs, were paid by railroads during the four months October 1956 through January 1957 for violations of the Safety Appliance Acts, the Hours of Service Act, and Accident Reports Act.

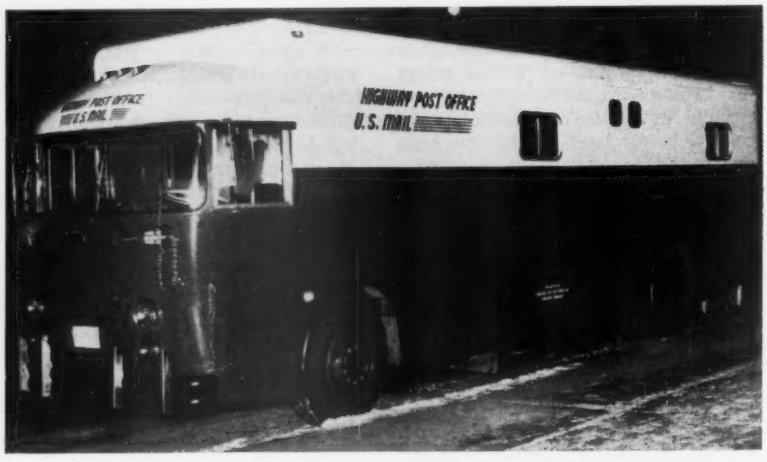
This was reported by the ICC in statements which also showed that $24,300 of the total was paid for 243 violations of the Safety Appliance Acts. There were 60 counts involving violations of the Accident Reports Act on which the fines totaled $2,500, and 10 violations of the Hours of Service Act, for which a total of $1,000 was paid.

C&NW, Post Office Try New Mail Plan

When a railroad-operated highway post office rolled out of the Twin Cities recently, on a maiden run to nearby Mankato, Minn., it marked the opening of a new deal for transporting mail in the Minneapolis-Sioux City-Omaha region.

The HPO unit, one of three being placed in service, is operated by the Chicago & North Western. Use of such vehicles is one phase of the new set-up under which the C&NW will handle all mail in the territory under a four-year flat-rate contract.

This new arrangement actually began to come into focus late in 1956, after the post office department made tentative plans to withdraw mail from C&NW trains on the Twin Cities-Omaha run. Faced with this prospect, and its obvious impact on existing passenger service, the railroad countered with a proposal to take (*Continued on page 39*)



A TRIO of new highway post office trucks like the one above are now operated as part of the C&NW's mail handling service between Minneapolis-Sioux City and Omaha. Trucks are 35 ft long.

Questions and Answers

Of current interest | to the Transportation Department

THE PROBLEM—as presented in the January 21 issue:

A Portland, Ore. lumber mill had loads for the following 15 cities, with box cars required for the loadings:

Asheville, N. C.
Birmingham, Ala.
Denver, Colo.
Detroit, Mich.
Evansville, Ind.
Little Rock, Ark.
Louisville, Ky.
Los Angeles, Cal.
Milwaukee, Wis.
Mobile Ala.
Phoenix, Ariz.
Springfield, Mass.
St. Louis, Mo.
Toledo, Ohio
Washington, D. C.

The Southern Pacific furnished the following ownerships in filling the mill's car order.

AC&Y; ATSF; CB&Q; D&H; D&RGW; Erie; GA; L&A; N&W; NC&StL; NS; Soo; SP; TC; and T&P.

Which car did the mill load to each destination, so that when the car arrived it was either (1) on the owning road; (2) at a junction with the owner; or (3) within 200 miles of a junction with the owner?

CONDUCTED by G. C. RANDALL, district manager, Car Service Division (ret.), Association of American Railroads, this column runs in alternate weekly issues of this paper, and is devoted to authoritative answers to questions on transportation department matters. Questions on subjects concerning other departments will not be considered, unless they have a direct bearing on transportation functions. Readers are invited to submit questions, and, when so inclined, letters agreeing or disagreeing with our answers. Communications should be addressed to Question and Answer Editor, Railway Age, 30 Church Street, New York 7.

Here are the answers to the Car Service "Quiz."

THE ANSWERS—The mill loading forces matched destinations and cars as follows:

Destination	Car Used
Asheville	NS
Birmingham	GA
Denver	D&RGW
Detroit	AC&Y
Evansville	TC
Little Rock	L&A
Louisville	NC&StL
Los Angeles	ATSF
Milwaukee	Soo
Mobile	T&P
Phoenix	SP
Springfield	D&H
St. Louis	CB&Q
Toledo	Erie
Washington	N&W

These applications placed — or would place— the cars on home rails with a minimum of empty mileage, totaling 1,226 mi. *However*, eight alternative matchings were possible which would fill the conditions of the quiz: Detroit—Erie; Evansville—NC&StL; Little Rock—T&P; Louisville—TC; Los Angeles—SP; Mobile—L&A; Phoenix—ATSF; Toledo—AC&Y. These alternate applications were considered correct.

Answers are still coming in, so you'll hear more about the quiz in the March 18 issue.

The following sent in the right answers:

ASSOCIATION OF AMERICAN RAILROADS—CAR SERVICE DIVISION—(car service agents): C. D. Barker, Youngstown, Ohio; J. S. Fuller, Chicago; F. M. Quinn, Baltimore Md.; E. E. Waltman, Louisville, Ky.; S H. Whitehead, Philadelphia.

ANN ARBOR: G. W. Bates, agent, Shepherd, Mich.; J. G. Estrel, Toledo, Ohio, and L. E. Robinson, freight agent; M. D. Gruss, clerk, Cadillac, Mich.

ATCHISON, TOPEKA & SANTA FE: T. E. Carpenter, chief clerk, Independence, Kan.

BELT OF CHICAGO—C&WL: J. H. Schroeder, stenographer-clerk.

BESSEMER & LAKE ERIE: E. L. Maurer, demurrage agent, Greenville, Pa., and F. T. Westmeyer, superintendent transportation.

CENTRAL OF GEORGIA. H. L. Bishop Jr., assistant superintendent, Cedartown, Ga.; J. C. Sawyer, trainmaster, Macon; N. S. Smith, terminal trainmaster, Savannah.

JERSEY CENTRAL: F. W. Ehmann, agent, (NY&LD)) Asbury Park, N.J.; K. W. Ivins, clerk, Bridgeton; J. W. Ousterman, agent, Eatontown; F. S. Tilton, agent, Lakewood; W. C. Leopold, agent, Palmerton, Pa.

CHICAGO, BURLINGTON & QUINCY: L. E. Gockley, agent, St. Francis, Kan.

CHESAPEAKE & OHIO: H. H. Harwood Jr., staff assistant, Cleveland; W. Ross, engine supplyman, Huntington, W. Va.

CHICAGO, ROCK ISLAND & PACIFIC: B. N. Bauer, operations trainee, and H. B. Christianson Jr., assistant chief engineer, Chicago.

CHICAGO & EASTERN ILLINOIS: B. F. Keyes, car service agent, Chicago.

CHICAGO & ILLINOIS MIDLAND. J. S. Ott, agent, Springfield, Ill.; H. V. Weinheimer, agent, Pekin.

DENVER & RIO GRANDE WESTERN: R. S. Allen, office engineer, Denver, Colo. and E. C. Hostetter Jr., secretary.

DULUTH, SOUTH SHORE & ATLANTIC: B. Levenduski, supervisor car service, Marquette, Mich.

ELGIN, JOLIET & EASTERN: S. V. Morgan, agent, Whiting, Ind.

ERIE: E. A. Abrams, relief clerk, Newark, N.J.; H. D. Adams, agen, Ashland, Ohio; W. F. Arters, agent, Olean, N. Y.; F. R. Ball, agent, Barberton, Ohio; E. A. Blair, supervisor stations & service, Marion, Ohio; W. M. Bramlee, agent, Bradford, Pa.; L. Buckingham, chief clerk, Creston, Ohio; W. M. Bumgardner, agent, Decatur, Ind.; J. J. Burke, rate clerk, Barberton, Ohio; M. N. Cook, agent, Bloomfield, N. J.; D. J. Crowley, car distributor, Jersey City, N. J.; V. Danals, agent, Wadsworth, Ohio; K. W. Dingle, relief yardmaster, Meadville, Pa.; M. A. Egner, operator-clerk, Kenton, Ohio; E. G. Fornefeld, yard clerk, Dayton, Ohio; E. J. Garafano, agent, Nutley, N. J.; L. A. Gardell, Cleveland; R. B. Gardner, agent-yardmaster, Brockway, Pa.; T. M. Gilbert, chief clerk, Elmira, N. Y.; D. H. Gorman, car distributor, Marion, Ohio, and C. C. Gruber, chief clerk; W. J. Hanley, chief clerk, Newark, N. J., and W. C. Harbourne, freight agent; W. L. Hertle, clerk, Barberton, Ohio; B. B. Hill, agent, N. Lewisburg, Ohio; W. B. Hishman, chief clerk, Meadville, Pa.; E. P. Hottman, operator clerk, Kenton, Ohio; R. E. Howe, agent, Salamanca, N. Y.; H. W. Jones, commercial agent, New York; I. A. Knepp, rate & ticket clerk, Wadsworth, Ohio; J. C. McCauley, car distributor, Huntington, Ind.; S. D. McNeil, agent, Kent, Ohio; S. Minneci, chief yard clerk, Salamanca, N. Y. and L. M. Moore, car distributor; F. F. Moniot, demurrage clerk, Newark, N. J.; K. F. Morrison, agent, Union City, Pa.; J. P. O'Donnell, relief yard clerk, Meadville, Pa.; E. B. Peake, agent, Creston, Ohio, J. H. Plum, chief clerk, Urbana, Ohio; J. E. Qualey, yard clerk Youngstown, Ohio; E. A. Robinson, agent, Ravenna, Ohio; E. J. Robisch, superintendent, Marion, Ohio; J. J. Rohan, car distributor, Hornell, N. Y.; T. E. Schlingman, yard clerk Ashland, Ohio; P. E. Schwartz, chief clerk, Huntington, Ind.; H. J. Sieb, chief clerk, Cleveland, and D. S. Smith, yard master; W. H.

Smith, car clerk, Bloomfield, N. J.; G. J. Snider, general yardmaster, Youngstown, Ohio; P. A. Snyder, chief clerk, Ashland, Ohio; A. H. Specker, trainmaster, Marion, Ohio, and A. G. Stine, agent; J. S. Todd, agent, Kenton, Ohio; J. L. Tomlin agent, Urbana, Ohio; H. M. Tuttle, general yardmaster, Huntington, Ind.; L. J. Vernol, chief clerk, Newburgh, N. Y.; J. W. Vickers, Meadville, Pa.; C. I. Waite, agent, Forestville, N. Y.; J. A. Weaver, chief clerk, Dayton, Ohio; M. V. Wells, agent, Huntington, Ind.; C. H. Williamson, agent, Richwood, Ohio; E. E. Woodford, Ashland, Ohio; H. L. Wood, agent, Newburgh, N. Y.

GEORGIA & FLORIDA: R. L. Adams, clerk J. C. Nash, general agent, and J. V. Stringfellow, operator-clerk, Augusta, Ga.; T. H. Maxwell Jr., agent, Greenwood, S.C.

GREAT NORTHERN: J. J. Boettner, assistant to general superintendent transportation, and L. Bolger, passenger car clerk, St. Paul, Minn.; Glen L. Brooks, agent, Nashua, Mont.; I. D. Christianson, agent, Granville, N. D.; M. W. Foster, agent, Klamath Falls, Ore.; M. F. Giddings, yard clerk, Breckenridge, Minn.; O. E. Herman, telegrapher, Aberdeen, S.D.; W. W. Johnson, traffic department, Atlanta Ga.; A. J. Karras, agent, Crookston, Minn.; A. E. McKane, agent, Columbia Falls, Mont.; L. B. Martin, agent, Havre, Mont.; P. P. Moore, agent, Buolded, Mont.; M. A. Morrison, agent, Lakota, N.D.; R. A. Osman, agent, Hillsboro, N.D.; D. E. Parks, trainmaster, Klamath Falls, Ore.; W. C. Preston, assistant general superintendent transportation, and E. P., Schmidt, stenographer, St. Paul, Minn., R. J. Purviance, agent, Hendrum, Minn.

ILLINOIS CENTRAL: J. E. Weber, car distributor, Chicago.

KANSAS CITY TERMINAL: T. L. Cunningham, order clerk, Kansas City, Mo.

LOUISIANA & ARKANSAS: L. E. White, car clerk, Alexandria, La.

MC CLOUD RIVER: W. P. Heflin, chief dispatcher, McCloud, Cal.

MISSOURI-KANSAS-TEXAS: M. F. Engman, district sales manager, Indianapolis, Ind.

MONON: O. C. Warrenfelt, freight traffic agent, Indianapolis, Ind.

NASHVILLE, CHATTANOOGA & ST. LOUIS: O. Wimmer, Nashville, Tenn.; M. S. Womack, assistant trainmaster, Chattanooga.

NEW YORK CENTRAL SYSTEM: L. F. Barry, assistant car distributor, Boston, Mass.; W. S. Brandies, chief clerk, Evansville, Ind.; M. M. Campbell, Saginaw, Mich.; W. R. Carroll, agent, Amsterdam, N.Y.; N. L. Casler, Syracuse, N.Y.; R. S. Corbett, agent, Battle Creek, Mich.; G. S. Crumbaugh, agent, North Manchester, Ind.; A. P. Danowsky, agent, Barrytown, N.Y.; J. C. Dierich, yard clerk, Saginaw, Mich.; R. K. Ellsworth, agent, Fulton, N.Y.; W. H. Felger, DeGraff, Ohio; F. Felter, agent, Canaan, N.Y.; B. C. Flegal, yardmaster, Avis, Pa; J. Ford, rate clerk, Indianapolis; Ind.; R. E. Haney, agent, New Carlisle, Ohio; R. B. Hodson, yardmaster, Syracuse, N.Y.; F. H. Knox Jr., car record clerk, Cincinnati; E. P. Keenahan, agent, Webster, N.Y.; H. J. LaRacque, agent, Watertown, N.Y.; J. L. Latshaw, yardmaster, Corning, N.Y.; W. H. Leary Jr., chief clerk, Boston and W. H. Muldoon, yardmaster; W. E. Lewis, rate & billing clerk, Mt. Carmel, Ill.; J. Miles, rate clerk, Syracuse, N.Y.; L. C. Nugent, agent, Benton Harbor, Mich.; H. L. Porter assistant comptroller, New York, N.Y.; J. F. Rentz, agent, Peekskill, N.Y.; G. C. Sheffer, agent, Fonda, N.Y.; R. G. Steeb, agent, Lansing, Mich.; W. E. Terrell, agent, Arcanum, Ohio; J. C. Woodbury, yard clerk, Rochester, N.Y.; Frances C. Worthen, Wabash, Ind.

NEW YORK, NEW HAVEN & HARTFORD: W. H. Walker Jr., agent-operator, Boston.

NEW YORK, CHICAGO & ST. LOUIS: C. O. Bacon, yard clerk, Lorain, Ohio; S. L. Baer, agent, Fort Wayne, Ind.; D. V. Bickel, Agent, Noblesville, Ind.; L. C. Bittigar, agent, St. Marys, Ohio, and R. P. Bodkin, clerk; I. A. Cogan, Jr., agent, E. Canton, Ohio; H. V. Cowan. car distributor, Chicago; H. Doucet, assistant general car distributor, Cleveland, and J. G. Hoge, transportation supervisor; L. J. Federer, general yardmaster, Muncie, Ind.; A. H. Horn, chief clerk, Lorain, Ohio; W. M. Hubbard, car distributor, Muncie, Ind.; M. G. Minich agent, Lorain, Ohio; C. N. Kraley, secretary, Cleveland; S. F. Krisher, agent, Steubenville, Ohio; M. J. Lautenslager, relief clerk, Lorain, Ohio; P. W. O'Brien, freight transportation inspector, Cleveland, and H. W. Nugent, assistant agent; M. A. Ogle, agent, Tipton, Ind.; R. A. McCandless, yardmaster, Fostoria, Ohio; L. F. Painter, agent, Stewardson, Ill.; C. H. Peffer, agent, Toledo; Mrs. Bonnie Rice relief car clerk, Frankfort, Ind.; R. E. Rolape, car clerk, Fort Wayne, Ind., and R. L. Stimmel, stenographer-clerk; D. E. Schultz, chief clerk, Elwood, Ind.; C. J. Taylor, transportation apprentice, Bellevue, Ohio; Zoe Vandaveer, delivery clerk, E. St. Louis, Ill.; C. L. Werts, car distributor, Frankfort, Ind.

NORFOLK & WESTERN: G. H. Eddins Jr., clerk, Roanoke, Va., and A. M. Eckstein, agent; L. G. Grace, agent-yardmaster, Durham, N.C.; J. A. Grasty, assistant to freight traffic manager, Roanoke, Va.; G. P. Ramsey, relief yardmaster, Lynchburg, Va.; W. R. Myers, Winston-Salem, N.C.; R. E. Straub, clerk, Louisville, Ky.; C. W. Tyree yard conductor, Lynchburgh, Va.

NORTHERN PACIFIC: W. R. Kelso, assistant car distributor, Tacoma, Wash.; J. T. Loran, assistant agent, Billings, Mont.; H. E. Ratcliff, agent, Plains, Mont.; C. S. Rothwell, agent, Red Lodge, Mont.; J. J. Sheskerin, St. Paul, Minn.; R. W. Swanson, Seattle, Wash.; H. Schweigert, agent, Terry, Mont.; W. F. Thomson, agent, Grandview, Wash.; L. L. Winchester, car distributor, Tacoma, Wash.; agent, Wheeler, Wash.

PENNSYLVANIA: C. E. Clifford, J. M. Kenderslis, and J. A. Pryor, Jersey City, N.J.; J. J. Myers, clerk, Marietta, Pa.; L. P. McKnett, freight agent, Cambridge, Pa.; J. P. Shuman, Philadelphia; B. A. Souttmatter, Jersey City, N.J.; C. E. Williams, district sales manager, **Erie, Pa.**

READING: C. H. Bilger, clerk, West Trenton, N.J.; J. P. Brubaker, agent, East Petersburg, Pa.; C. J. Burns, clerk, Philadelphia; H. E. Cockley, agent, Palmyra, Pa.; R. C. Engle, car distributor, Reading, Pa.; H. L. Fetter, agent, Gettysburg, Pa.; L. J. Garzia, clerk, Miquon, Pa.; J. B. Keating, agent, Trenton, N.J.; F. A. Mariani, agent, Read Valley, N.J.; J. A. Mitchell, clerk, Ambler, Pa.; C. A. Nagle, clerk, Jenkintown, Pa.; G. M. Sassman, division freight agent, Harrisburg, Pa.; D. M. Smith, agent, Noble, Pa.; M. T. Smith, agent, Denver, Pa.; P. J. Smith, agent, Jenkintown, Pa.; A. P. Stryker Sr., agent, Morrisville, Pa.; A. K. Strouse, car distributor, Reading, Pa.; P. K. Tobias, agent, Schwenksville, Pa.; C. G. Wascher, clerk, Frackville, Pa.; M. L. Werner Jr., Philmont, Pa.

SANTA MARIA VALLEY: E. E. Brockman, general freight agent, Santa Maria, Cal.

SEABOARD AIR LINE: W. T. Averitt, traveling car agent, Norfolk, Va.; J. H. Holly, agent, Hamlet, N.C.; J. L. King, car distributor, Tampa, Fla.; W. A. Lee, agent, Elberton, Ga.; T. H. Maxwell Jr., agent, Greenwood, S.C.; J. D. Patterson Jr., Hamlet, N.C.; J. R. Tapp, traveling car agent, Tampa, Fla.; J J. Walker, agent, Colquitt, Ga.

SOUTH BUFFALO: D. I. Hosmer, assistant supervisor car service, Lackawanna, N.Y.

SOUTHERN: W. S. Hyman, assistant passenger traffic manager, Jacksonville, Fla.; G. A. Roberts, agent, Charlotte, N.C.

SOUTHERN PACIFIC: J. N. Baker, Sausalito, Cal.; F. C. Bechtel, clerk, Klamath Falls, Ore.; H. J. Carrington, car distributor, Dunsmuir, Cal.; F. M. Connett, general foreman-stores, Oakland, Cal.; J. O. B. Greaves, agent, Glendale, Cal.; W. B. Pippin, assembly clerk, General stores, West Oakland, Cal.; N. W. Spears, assistant car distributor, Dunsmuir, Cal.; E. J. Van Nordeck, passenger information clerk, Los Angeles; D. J. Will, Glendale, Cal.; D. C. Wimer, assistant trainmaster, Fresno, Cal.

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WESTERN MARYLAND: F. L. Arnott, agent, Laurel Bank, W. Va.; R. C. Bair, general car distributor, Hagertown, Md., E. C. Leather, superintendent transportation, J. H. Rohrer, chief clerk; G. E. Crawford, agent, York, Pa.; E. W. Haines, agent, Luke, Md.; C. E. McClain, agent, Cullen, Md.

WESTERN PACIFIC: T. Kelly, passenger traffic representative, Oakland, Cal.

OTHER THAN RAILROAD EMPLOYEES: G. W. Billmyer III, St. Louis, Mo.; C. Blaubach, Los Angeles, Cal.; F. Curry, Union Switch & Signal Division, Westinghouse Air Brake Company, Pittsburgh, Pa.; C. L. E. de Gaugue, Johns-Manville, Manville, N. J.; E. A. Horine, Baltimore, Md.; D. S. Horning, Richland, Wash.; L. C. Johnson, La Grande, Ore.; W. L. Mathews, general agent, Union Refrigerator Transit Lines, Milwaukee, Wis.; Miss Evelyn M. Smart, Ontario, Cal.; R. P. Stair, Champaign, Ill.; R. J. Staunton, San Gabriel, Cal.; J. Wilson, Jamaica, N.Y.; R. J. Worbois, Westinghouse Air Brake Company, Wilmerding, Pa.; R. B. Wright, General Electric Company, Mountain View, Cal.

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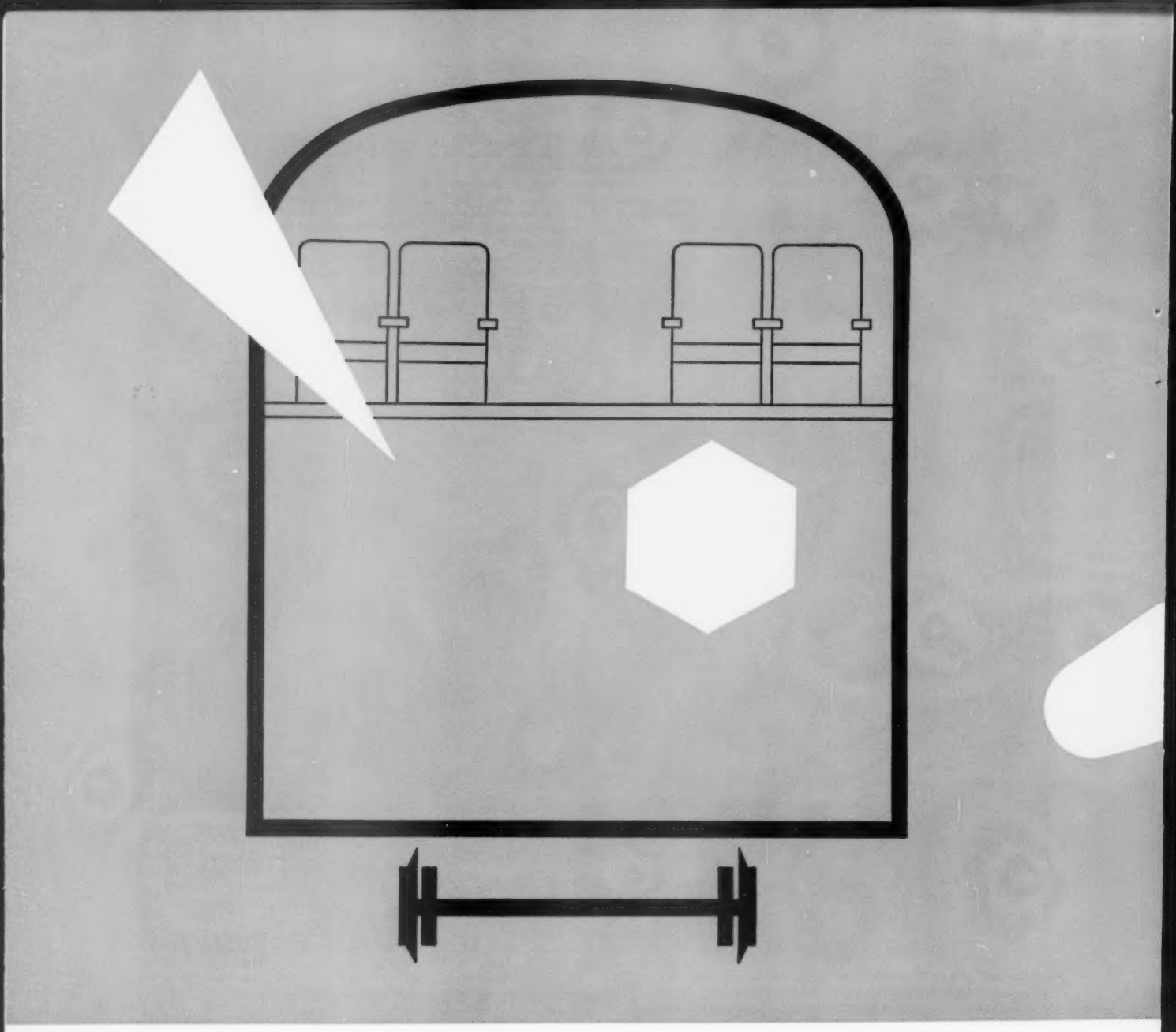

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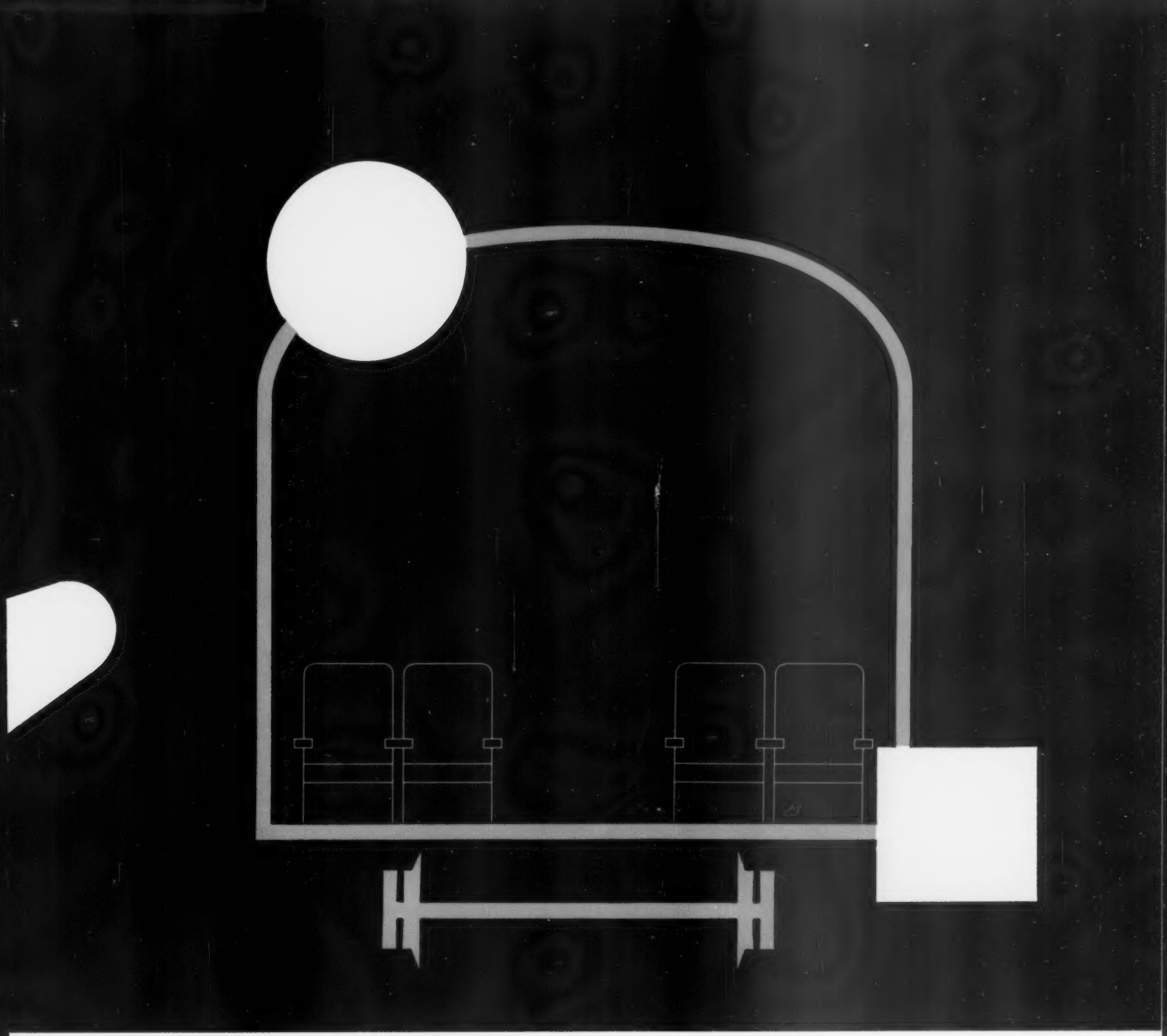
Light weight? Pioneer III, built of sturdy stainless steel and mounted on four-wheel trucks, weighs only 53,000 pounds.

Regardless of Washington, there are many, many things that railroads can do to reduce their passenger deficits, and to so improve their passenger service travelers will prefer to go by train. Every Budd car is designed and built to serve those ends.



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The metal itself is expensive, beautiful, corrosion resistant, and, for any given strength, as light as aluminum.

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That is why it is possible to design and build a car like Pioneer III, weighing only 53,000 pounds, 85 feet long, with four-wheel trucks, that complies with all AAR strength specifications.

Nobody knows the life of a Budd-constructed stainless steel car, for, while many have traveled more than seven million miles, none has ever worn out or become obsolete.

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This concrete retaining wall, built by the Southern Railway at Georgetown, Ind., is a combination of cast-in-place columns and precast concrete panels. This clean-cut, modern retaining wall replaced an old timber structure and proved to be an excellent solution to a limited right-of-way problem.

Concrete retaining walls are just one of more than 160 uses of portland cement and concrete which enable railroads to improve service, provide greater safety, save time and money. The moderate first cost of such concrete improvements—plus their long life and low maintenance cost—result in ***low annual cost.*** This saves money for other necessary budget items.

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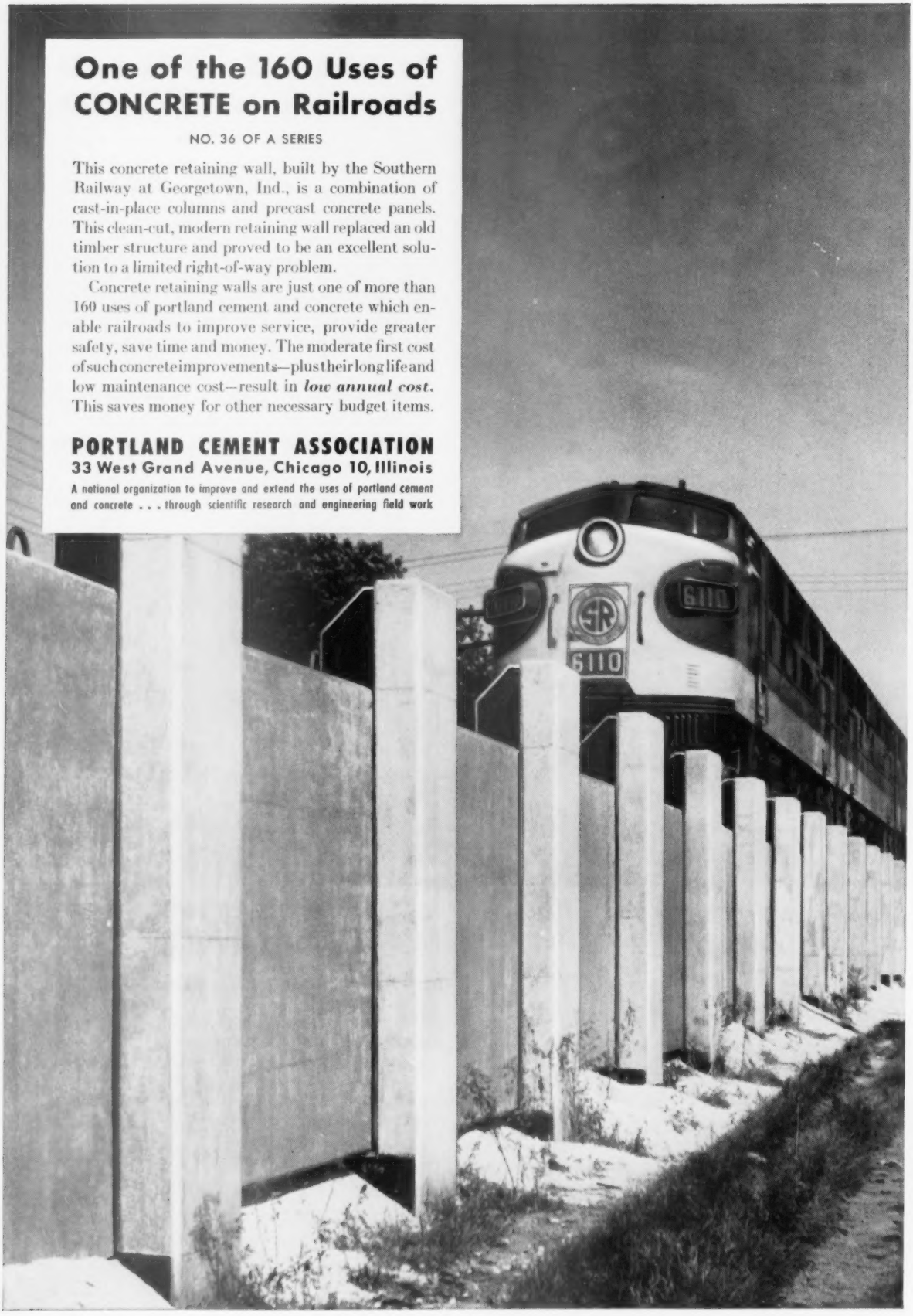
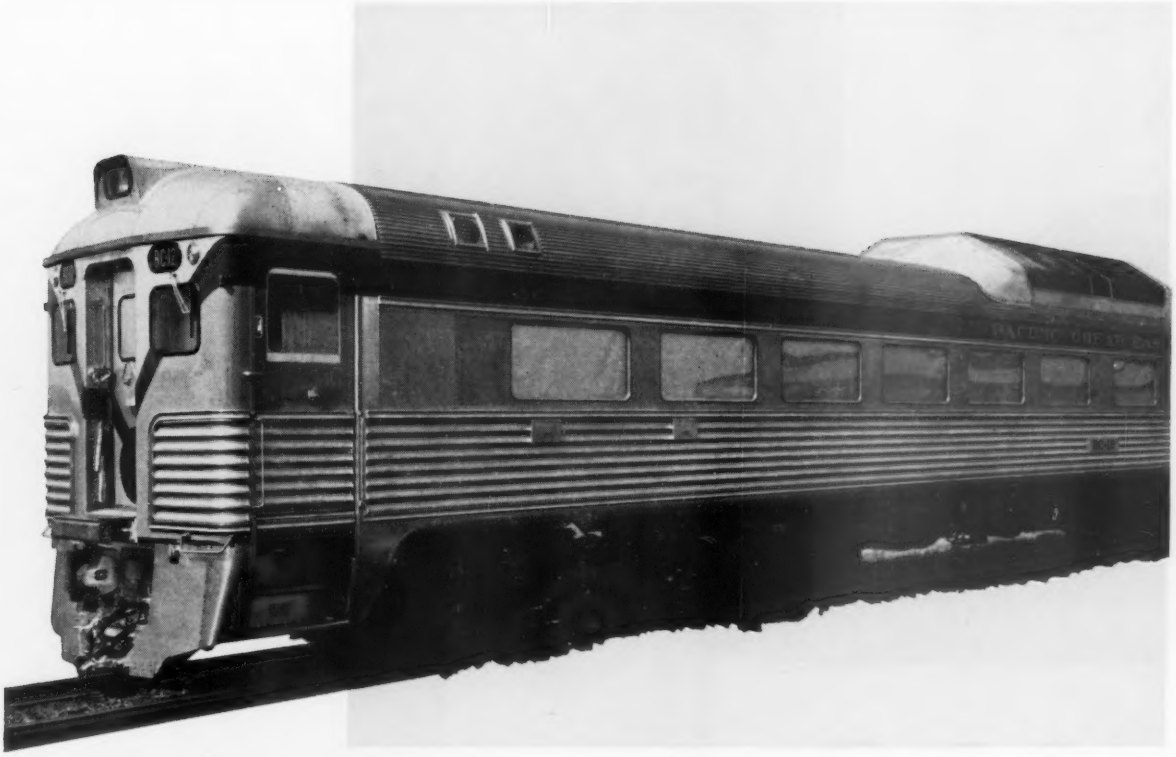




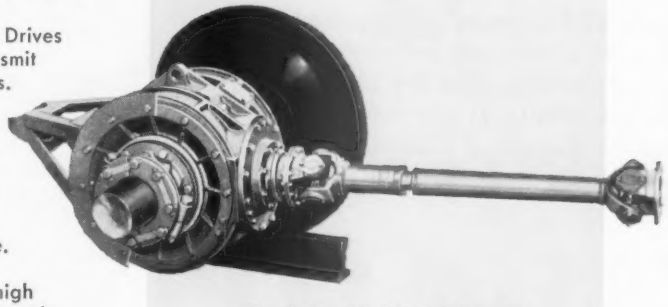
Budd uses the Spicer Drive for swift, economical Rail Car service

Budd Rail Diesel Cars are being adopted in ever-increasing numbers throughout the world because of their proved ability to reduce costs, improve service and attract traffic.

These Budd cars are equipped with two Spicer Drives that mount directly on the axles, and transmit power from the diesel engines to the wheels.

The Spicer Drive is a self-contained unit employing ground spiral bevel gears, with all wearing parts running in a constant bath of oil, completely sealed and protected from ballast, dirt, water, snow, etc., for long life and freedom from maintenance.

This unit incorporates the same features of high efficiency, economy, safety, quietness, and smoothness associated with over 12,000 Spicer positive generator drives in use on railway Pullman coaches, diners, and other rolling stock throughout America.



The Spicer Model 8 Drive as used in Budd Rail Diesel Cars.

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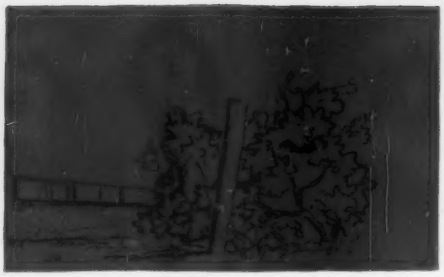

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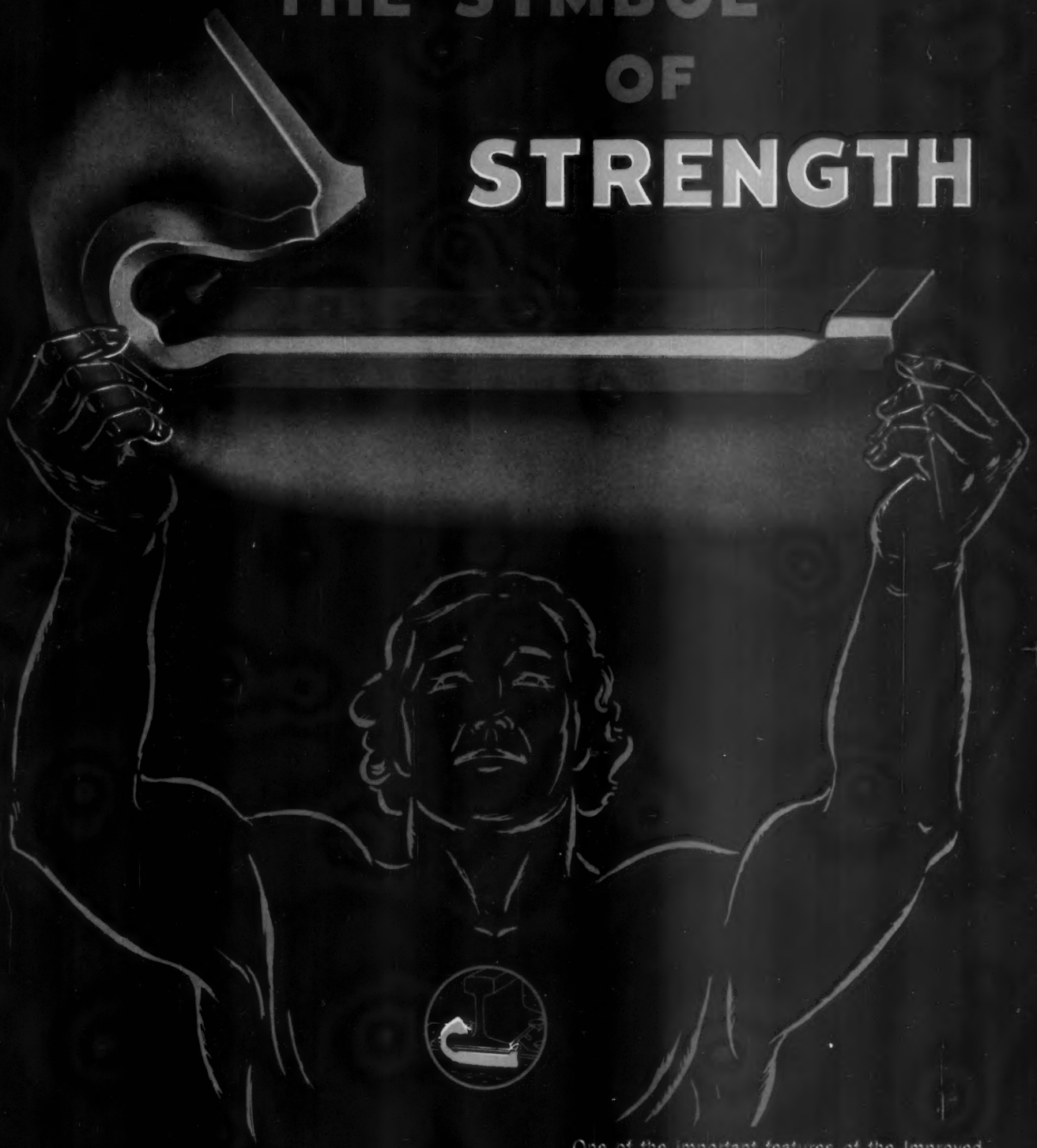

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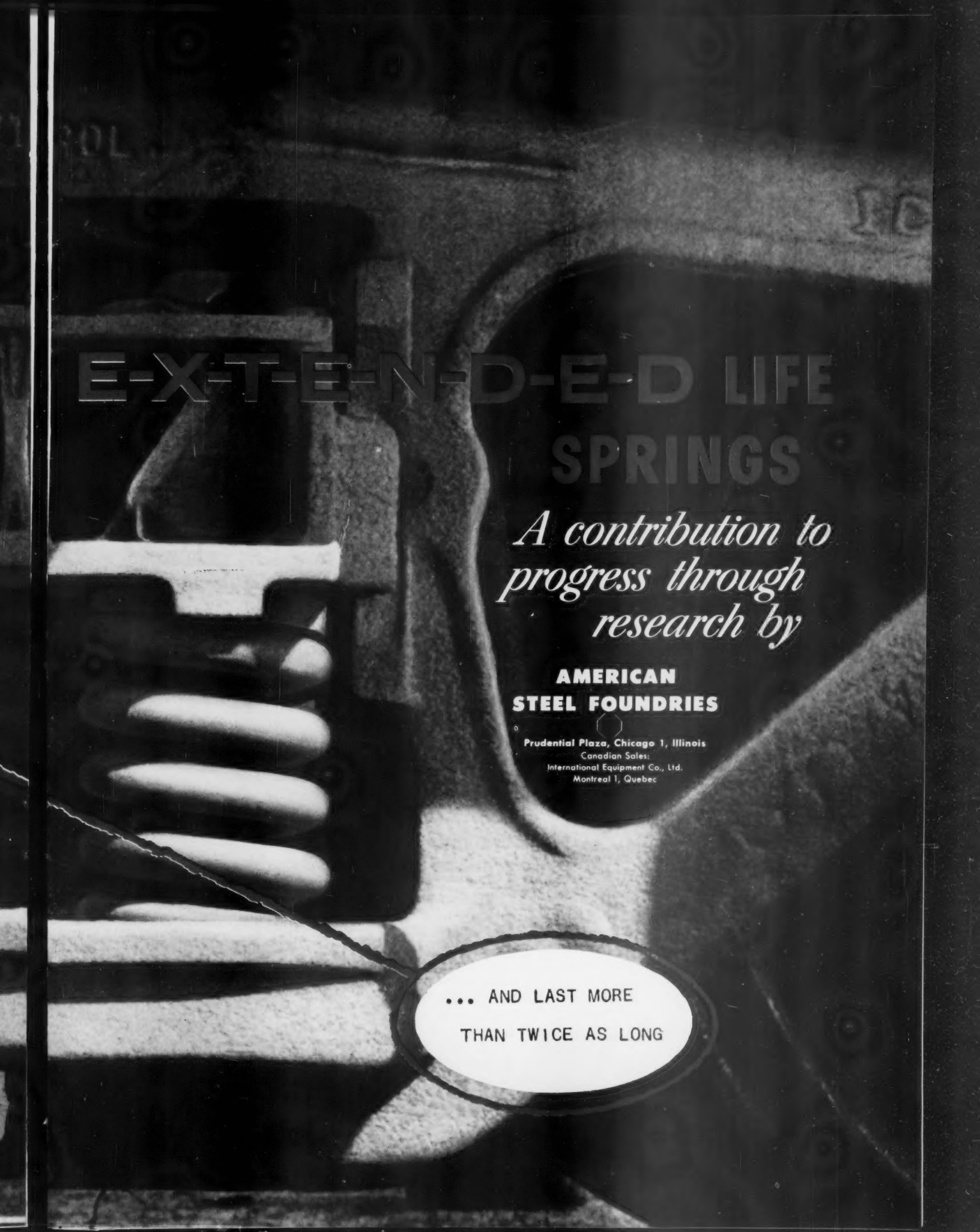
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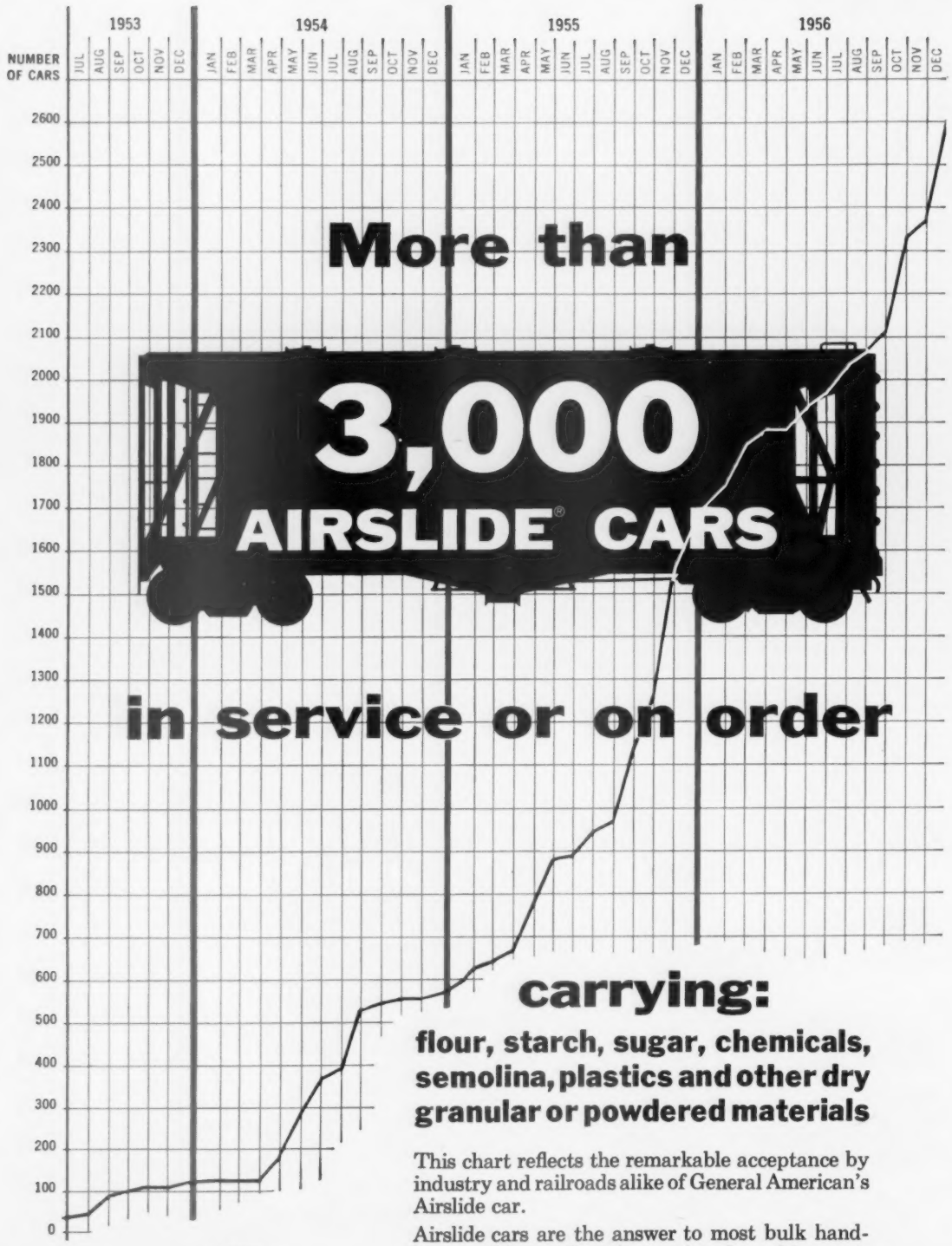

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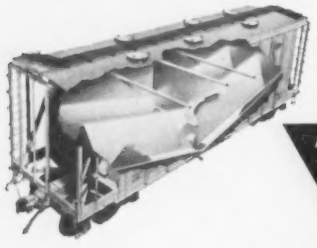

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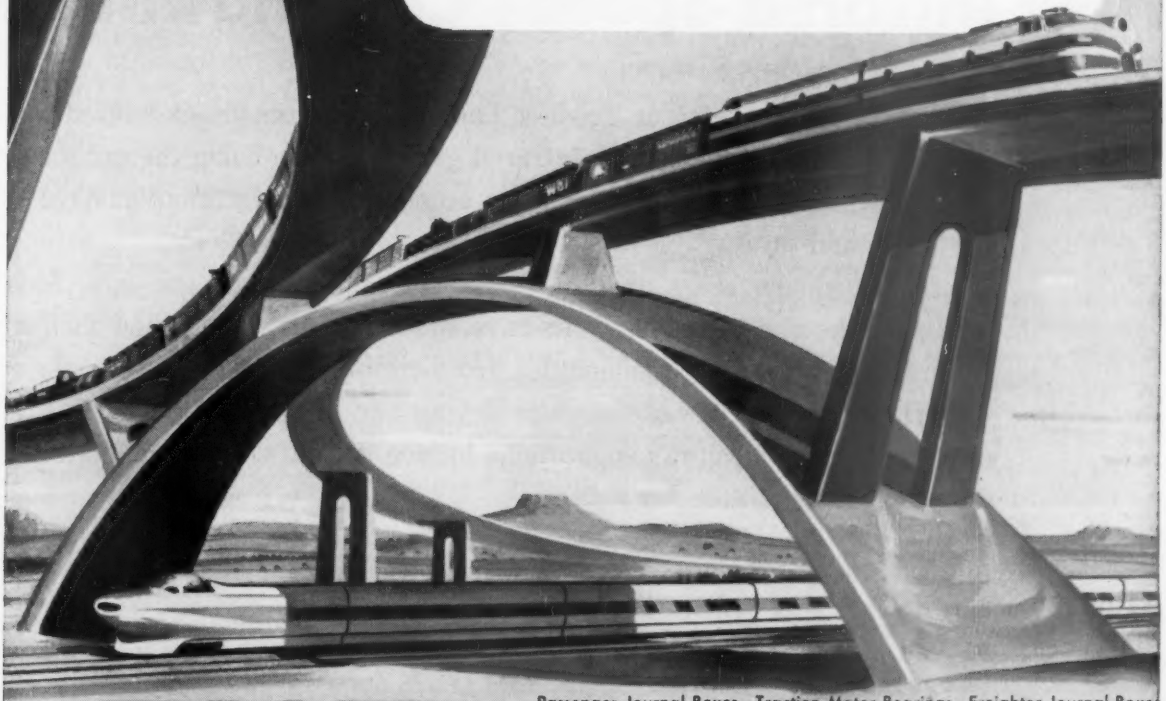

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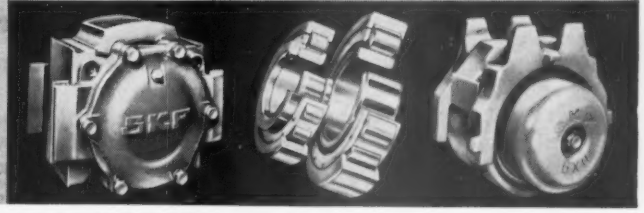
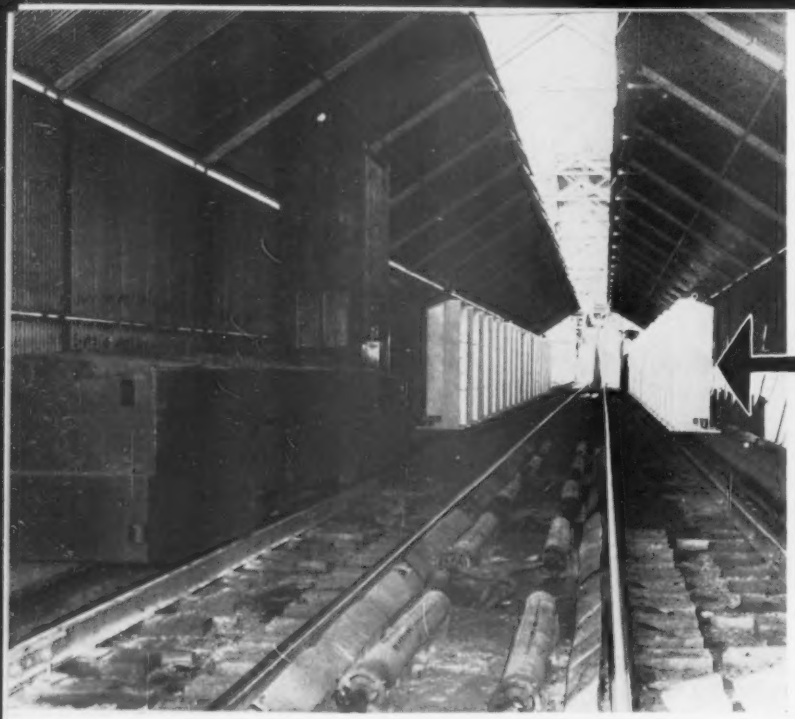
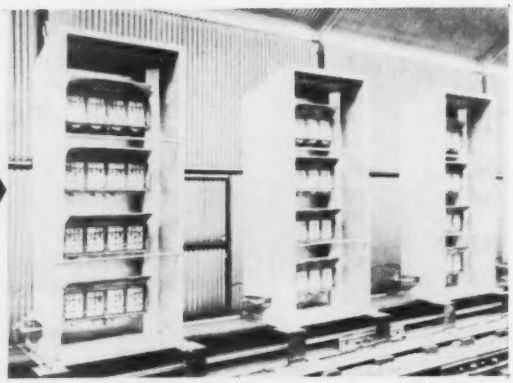
Passenger Journal Boxes Traction Motor Bearings Freighter Journal Boxes







"SWEAT BOX": Pusher locomotive (far left) places seven frozen ore cars within windbreak. Three cars fit between 36 infrared heat-treating cabinets (left arrow). Next installations will lower cabinets to direct more heat against hoppers. Under-car "hot dogs" (left foreground) eventually will be infrared. Sixteen "Rayheads" in each cabinet (above) take propane from storage tanks outside the windbreak.

SEE FOR YOURSELF

How Infrared Speeds Car Thawing

The car dumping rate at Toledo's Lakefront Dock has been doubled this winter, since Schwank gas-fired, infrared generators are doing the car thawing job. Frozen coal is loosened rapidly, economically and without damage to the lading and cars.

Infrared is now being used in Montana to thaw frozen ore cars. Railroads, utilities and industrial plants have shown interest in this new method for freeing frozen bulk commodities from open-top cars.

Infrared has been tested for paint drying and shop heating by one U.S. railroad. European railway applications include the thawing of switches and the pre-heating of rails for welding.

Soon after the opening of the Toledo Lakefront Dock, its joint owners, the NYC and B&O, formed a committee to study the most effective and economical method for thawing cars of frozen coal. Committee members visited most U.S. car thawing operations.

Steam lance thawing was tried. By 1953 the committee made a recommendation which eliminated the track fires and hand torches which were then standard at Toledo. This was a thawing facility along the track leading to the Neyl & Patterson dumper on the No. 2 dock. Windbreaks extending seven car lengths along this track protected oil-fired torches between the rails and refractory heaters directed at the car sides. The 56 between-the-rail heaters (known as "hot dogs") were installed for two car lengths at the outer ends of the thawing enclosure, heating the cars as they approach the cabinets. The central three car lengths had the car side heaters.

With this installation the dumping rate was almost doubled. This meant more tons per hour across the dock, less delay to boats, and lower costs per ton handled.

Something Better Sought

The joint railroad committee continued to search for something still better. Consideration was given to other methods of thawing, and in some cases they were laboratory tested. Indications were that they would be costly and somewhat limited in application. Then, in November

PLANS HAVE BEEN MADE to install auxiliary infrared unit at the top of dumper (foreground) to warm cars as they wait for car in shed to move out.

1955, the committee learned of the Schwank gas infrared generator which had then just been introduced into this country.

The Schwank infrared generator was patented in Germany after World War II by Gunther Schwank. It was first mass produced in Europe in 1952. It has been introduced in the U.S. by Perfection Industries of Cleveland.

How "Rayhead" Functions

The device burns gas on the surface of a ceramic mat. The generator consists of a housing which holds the ceramic mat. The mat is made up of eight 1¾ by 2½-in. ceramic catalysts each ⅜-in. thick and perforated with 200 holes per sq in. This combination is called a "Rayhead."

Gas is metered through an orifice, passes through an air aspirating chamber and a mixing tube to a chamber under the ceramic mat. This is a 100 per cent primary air burner, and the air-gas mixture burns on the surface of the ceramic at a temperature of approximately 1650-deg F.

The insulating qualities of the ceramic are such that the surface ⅜-in. away from the combustion surface does not become warm enough to ignite the gas in the mixing chamber —i.e., the burner reportedly will not back-fire. All gaseous fuels can be used. Manufactured gas is burned on ceramics which have smaller holes than those used for natural or liquified petroleum gas. The first railroad tests and the first permanent installation of this device were made by the Toledo Lakefront Dock Company.

At the request of the railroads' committee, Perfection Industries fabricated some special equipment for tests at Toledo Lakefront Dock. Experiments were conducted late in January 1956. Though the number of units was inadequate to do a complete thawing job, the tests did succeed in demonstrating the capabilities of this method. On the basis of the tests it was decided to recommend installa-

Toledo Lakefront Dock

The Toledo Lakefront Dock is the largest combined coal and ore handling facility on the lower Great Lakes. It is also one of the newest; it went into operation in 1948, replacing two separate railroad docks.

The facility is operated jointly by Oglebay, Norton & Company and Pickands Mather & Company. Oglebay handles the B&O's dock operations along Lake Erie, and Pickands does the same job for the NYC. The Toledo Lakefront Dock is jointly owned by the two railroads.

Principal sources of the coal dumped at Toledo are West Virginia and Kentucky, and the principal originating road is the Norfolk & Western. Over 10 million tons of coal went over these docks in 1956.

Winter coal shipments have been increasing through Toledo in recent years; ships operate to Detroit the year around. A typical cargo will be 150 carloads. The summer dumping rate is usually about 40 cars per hour. This slows down in the winter when coal freezes in the cars. The type of coal, the weather to which loaded car has been exposed, the length of time the car has been held awaiting the ship, and the prevailing temperatures all play a part. Under the poorest conditions, the dumping rate has dropped to as low as three cars per hour.

Dry coal not badly frozen can be dumped at the rate of twenty cars per hour. The average rate of dumping has about doubled since the installation of infrared.

What Infrared Is

Infrared rays are waves of electromagnetic energy produced by the sun, by an open fire, and by a heated object. Infrared waves warm the objects they contact, but not the space between the infrared source and the objects. Visible light is electromagnetic wave energy of shorter wave lengths than infrared.

Conventional electric infrared lamps produce "near" infrared wave lengths which are closest to those of visible light. Schwank generators produce "far" infrared from a source which operates at lower temperatures than electric infrared heaters.

tion of Schwank units to be used initially with some of the oil-fired, under-car heaters previously installed.

During the autumn of 1956 the new installation was completed. A roof was added to the windbreak and thirty-six gas infrared units were substituted for the oil-fired, car-side refractory heaters. At the same time Perfection has been working on between-the-rails gas infrared units. The entire Toledo dock gas infrared installation is fired with propane gas supplied by a local distributor, and ultimately the entire thawing operation will use only this fuel.

The primary aim of all the work by the joint railroad committee has always been to find methods for increasing the dumping rate. Elimination of long delays to boats is of prime importance.

Gas infrared has been successful in speeding the thawing operation, and also has been cutting costs.

The new gas infrared installation, according to T. C. Sparks, general manager of Toledo Lakefront Dock, "has resulted in about doubling our dumping rate and reducing fuel costs by about 40 per cent. Development of a new infrared 'hot dog' will add further to the effectiveness and economy of this operation which eventually will be uniformly fed by propane gas. Use of natural gas, or a combination of natural and manufactured gas will effect even further savings."

Railroading After Hours with Jim Lyne

TRAFFIC DINNERS—Along with a ticket to one of the traffic club dinners, I received a neat little card asking my help in "preserving decorum during the dinner so that the necessary respect may be paid to our honored guests and to the speakers."

I did my best (I hope with reasonable success) to conform to this polite request. And I think passing around a reminder like this, to those attending big dinners such as these, is a good thing. Sociability is one of the chief purposes of these dinners—but they have a more serious purpose, too. If the conviviality is kept at a moderate level till the serious business is over, then the gathering serves two worth-while purposes instead of only one.

MO. PAC. GUIDE BOOK—I have just got a present from the Missouri Pacific—a book entitled "The Empire That Missouri Pacific Serves." It contains a brief history of the railroad, but its special feature is a historical and descriptive paragraph or two, alphabetically arranged, on every town and city on the system. The book should make a handy travel guide, as well as a reference manual, for the railroad's entire territory.

Speaking of books, there are some good ones coming along. A new "Principles of Transportation"—which I haven't had a chance to read yet but which looks promising, has come in—the authors being Frank H. Mossman of Michigan State University and Newton Morton of Kent (Ohio) State University. Another one is a survey of the prospects for air freight, published by Harvard Business School—and which is full of ideas, not just for the airlines, but for railroad management and traffic people too.

OVERPASS SLOGANS—While I have been talking away here about putting freight-selling slogans on highway overpasses, the Long Island has been putting the idea into practice. Not selling freight service, but passenger service. As public relations director Jim Schultz tells it:

"We've been keeping an ear to the ground for quite a while for some inexpensive gimmick that would dramatically attract the attention of the thousands of Long Islanders who still misguidedly insist on driving their cars to and from New York."

So the railroad ran a slogan contest among employees and it got some excellent ones, as for instance:

FOR COMFORT AND REST

THE TRAIN IS THE BEST

or

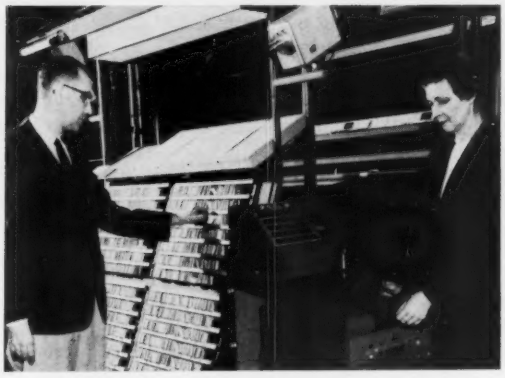
TRAFFIC A PAIN?

RELAX ON A TRAIN!

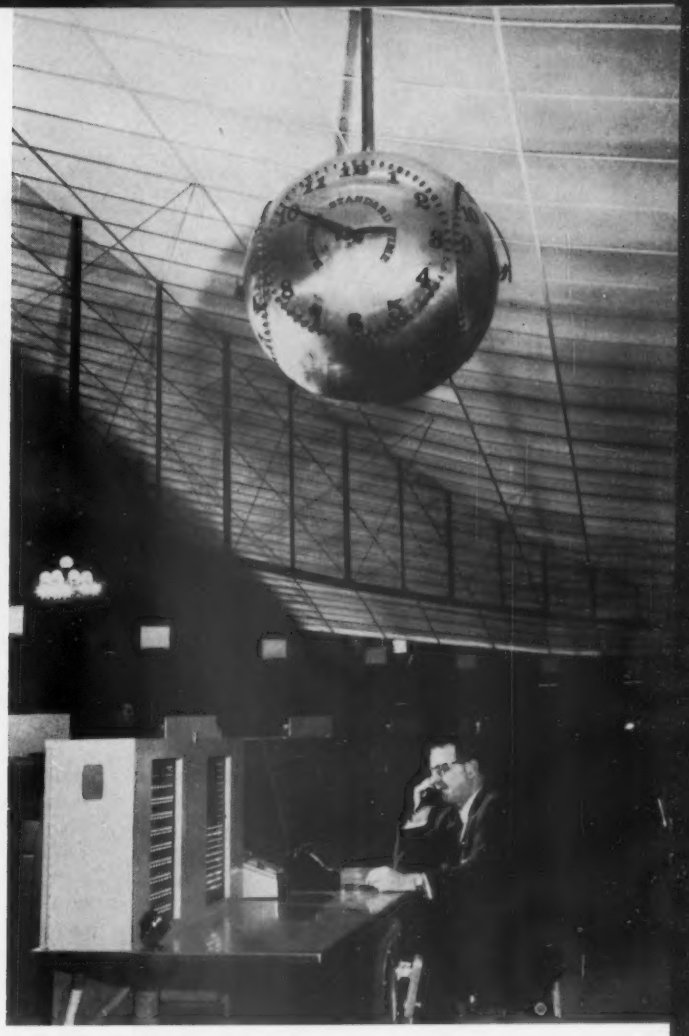
SLOW FREIGHT—Arthur Hesse of Alliance, Nebr., got interested in the question I raised about what often seems to be inordinately slow freight service and he notes that: "After several months' checking performance, I can only come to the conclusion that, overall, much of present service could compete with the ox-team on a time basis.

"The railroad industry needs more than relief from the transportation tax, inequitable regulation, and a rigid rate structure. We took the balloon stack off the engines years ago, but some of this balloon-stack thinking still seems to continue in the industry's thoughts service wise."

COUNTER TV shows reservations available at Pennsylvania Station, New York. Clerk asks "man in the back room" for space. Coupon is "facsimilied" back to counter where clerk's machine prints rail and Pullman ticket. Customer sees all.



"ON CAMERA"—Space distributor pulls out Pullman coupon. Passenger sees him "live" as he takes it to facsimile machine. For a phone request, he's "on camera" for telephone sales clerk, who sees coupon.



SATISFIED CUSTOMERS and up-to-date space availability data are PRR's goal for its new ticket sales and service bureau. Man under clock monitors incoming telephone calls; routes requests for special handling. Elapsed time of sale is 2 minutes.

Is Space Available? TV Tells You

TELEPHONE SALES clerks handle "phone" reservation requests. They "tune in" availability chart and "telautograph" request; space distributor "remote writes" answer. House phones also are tied in with telephone sales.

"RIDING HERD" in the coupon file, this girl, at a desk on wheels, has thousands of space coupons at her fingertips. She's promptly told about cancellations, and can "shoot" the appropriate coupon back to availability file by pneumatic tube.

Big 'Lift' for Small Road

The Staten Island Rapid Transit is getting the world's longest vertical lift span. The cost will be about $8 million—with Uncle Sam picking up most of the tab. Objective: Improved navigation in Arthur Kill between Staten Island and the New Jersey shore.

In 1959, the world's longest vertical lift span will have replaced an 1888-vintage swing span which carries the Staten Island Rapid Transit from Arlington, on Staten Island, across Arthur Kill to Cranford Junction (Elizabeth), N. J. The SIRT, wholly owned by the Baltimore & Ohio, runs an average of six trains across the bridge daily. This portion of the line carries freight only, serving industries on the island, with interchange of carload and LCL freight with the CNJ and Reading at Cranford Jct.

Ordered by the Army

Construction of the new span was dictated by demands of navigation and was ordered by the Army. The lift span will provide a 500-ft clear navigation channel and, when raised —as it normally will be—will provide 135-ft clearance above mean high water. The old bridge provides two navigation channels, each about 210 ft wide.

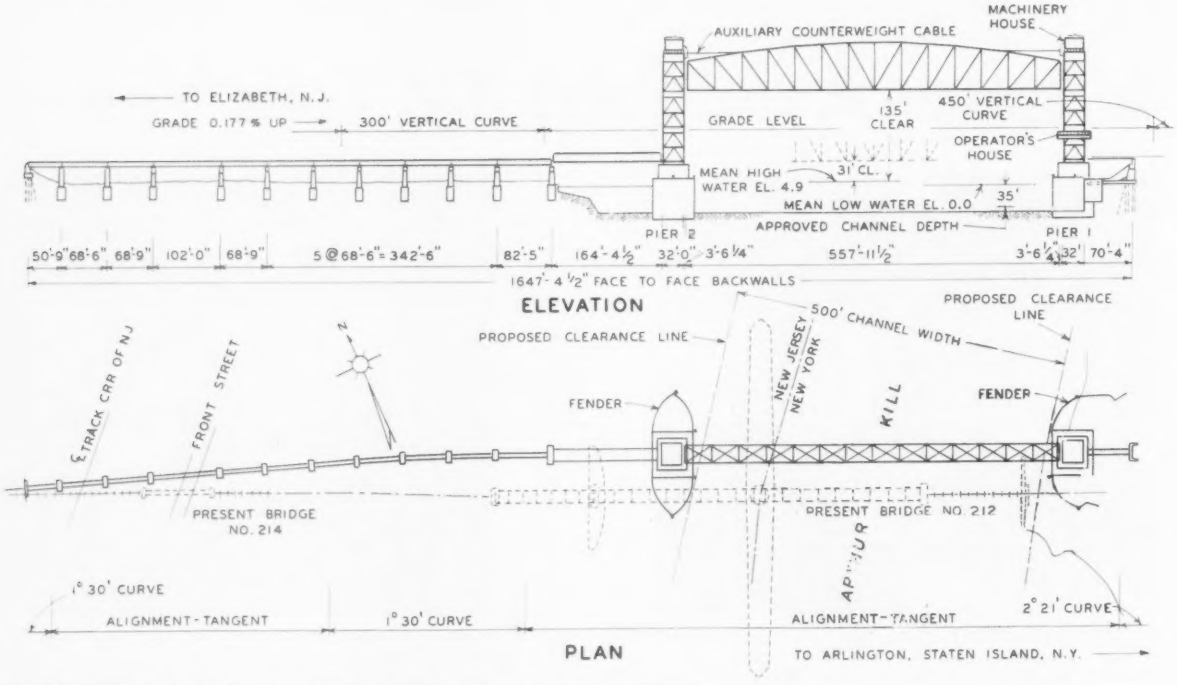
The old span will continue in use until the new structure has been completed; then it will be demolished. The new single-track bridge will be 1,647 ft long between abutment back walls. The vertical lift span—558 ft in length—will be flanked at either end by tower spans.

The east approach—the island side —will have a single, 68-ft deck-plate girder span. The west approach, on the New Jersey side, will include a 164-ft through-plate girder span—the longest girder span on the entire B&O system.

The substructure for the bridge will consist of the two main piers for the vertical lift span, with their fender systems, 11 approach piers and two abutments. All piers are to be carried to bedrock; the two abutments will be solidly supported on concrete piles.

Some 4,750 tons of fabricated structural steel will go into the new span. Of this, about 700 tons will be used in the approach spans. The remaining 4,050 tons of alloy and carbon steel will be used in the lift span and towers.

The 558-ft long vertical lift span will weigh about 2,000 tons. It will be connected to balancing counter-



NEW BRIDGE, shown here in elevation and plan, will replace structure built in 1888. About 4,750 tons of steel will go into its construction.

weights by 80 wire ropes, each 2¼ in. in diameter, passing over eight roller-bearing sheaves 15 ft in diameter. A maximum load of approximately 280 tons is anticipated at each bearing. Two complete electric drive motor systems, at the top of each tower, will raise and lower the span. The principal source of power will be on the New Jersey side, with provision for emergency power if needed.

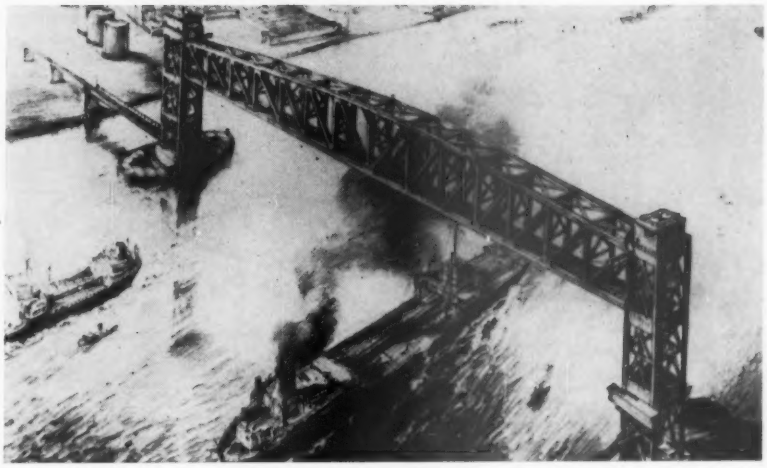
A Long Way Up

Normal vertical travel of the span will be 104 ft. The time required to raise or lower the span will be about 90 sec. The new bridge will be equipped with aviation warning beacons, navigation lights and an audible navigation signal, in conformity with CAA and Coast Guard requirements.

Work on the project is divided into three prime contracts. The substructure is being constructed under Contract No. 1 by Charles F. Vachris, Inc., Brooklyn, N. Y., for approximately $1.8 million. Contract No. 2 provides for the construction of the superstructure and the demolition of the old span by the American Bridge Division of the United States Steel Corporation. The amount of this contract is approximately $5.8 million —the largest single construction contract ever awarded by the B&O or any of its subsidiaries. Contract No. 3, to cover demolition of the remainder of the old structure and the construction of the fender system, has not yet been awarded. According to a B&O spokesman, the bridge is being built under the provision of the Truman-Hobbs Act with the government paying a "substantial" portion of the costs.

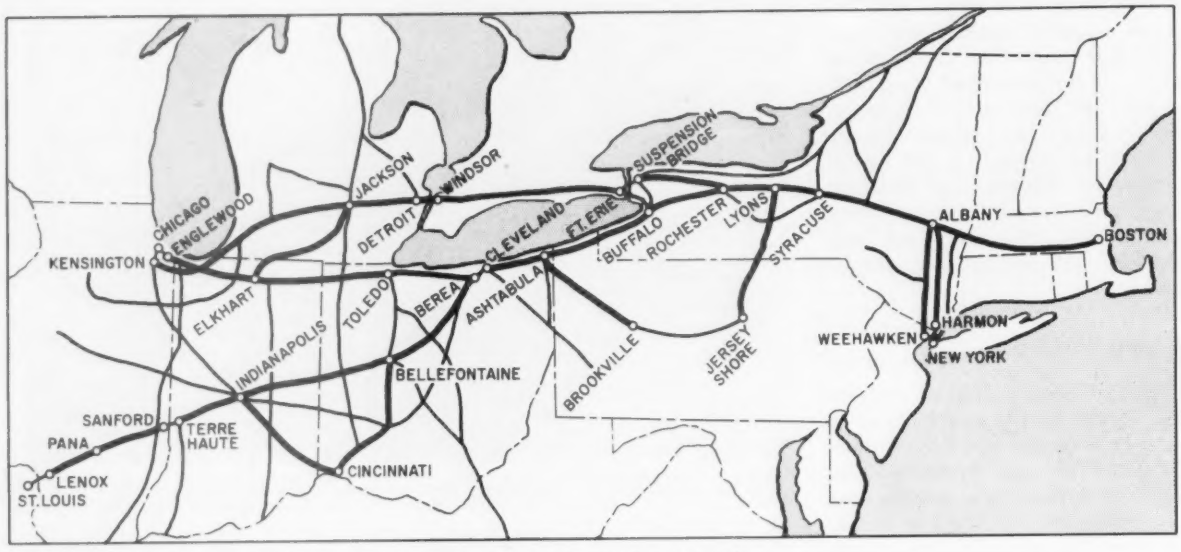
The new bridge is being constructed to cause the least possible interference to railroad traffic and navigation in the Arthur Kill channel. During erection of the vertical lift span, the channel will be closed to all navigation.

The vertical span, including towers and piers, was designed by Parsons, Brinckerhoff, Hall & MacDonald. The substructure and superstructure of the approach spans were designed by the B&O under the supervision of C. E. Sloan, engineer of bridges—now retired — and his successor, Abram Clark. Field work is under the jurisdiction of C. L. Kroll, regional engineer.



AMPLE CLEARANCE, the Army's first concern, is pictured in this artist's sketch.

TWENTY-THREE miles long, the SIRT—a B&O subsidiary—is completely electrified. Line from St. George to Tottenville carries passengers and freight. Other lines handle freight only.



BLUEPRINT for New York Central's 8-year track reducing plan. Heavy lines show . . .

Where CTC Cuts Down Trackage

When President Alfred E. Perlman pulled a switch dedicating the New York Central's Buffalo - Cleveland centralized traffic control (Railway Age, Jan. 21, p. 44), he passed the first milestone in a whopping big 8-year CTC program. Biggest by far in the industry, this program calls for taking up long stretches of main track. Object—to save money.

The Central's track-slimming plan will reduce all existing 4-track and 3-track main lines to double-track, with CTC power crossovers; and reduce many existing double-track main lines to single track CTC with controlled sidings. The map and table indicate the extent of this program. Scheduled for completion in 1963 and covering 3,665 miles, the CTC will cost about $43,000,000.

Although CTC has been installed extensively on single- and double-track lines all over the country, the Central's bold approach in eliminating main trackage, and the very size of the undertaking, has caused considerable interest in the industry.

Can the Central run 90-100 trains daily on two main tracks equipped with CTC? Certainly—they're doing it now on the 163 miles between Buffalo and Cleveland. Trains operate on signal indication in either direction on either main track. Double crossovers are spaced about six miles apart.

Operating expenses are knocked down three ways: (1) less track maintenance; (2) salvage of rail, ties and other track appurtenances when rail is removed; (3) reduction in manpower through remote control of local interlockings from the CTC machines.

These benefits are already realized on the Buffalo-Cleveland territory, the first CTC installation of the Central's

TWO TRACKS DO THE WORK OF FOUR on this Buffalo-Cleveland section, which includes power crossovers spaced about six miles apart.

8-year program. Formerly, four main tracks were in service here. The two center tracks, having speed limits of 80 mph for passenger trains and 60 mph for freight trains, were used by all passenger trains and most freights. The outside tracks, being signaled for lower speed, were used by slow freights and local trains. Each track was signaled for one direction operation only.

Now with only two main tracks the capacity to operate 90 to 100 trains daily, efficiently, is secured by more intensive use of these tracks. This is accomplished by (1) signaling each track for train movements either way, just like two single-track lines side by side, and (2) installing CTC-controlled double crossovers, an average of 6 miles apart, which are used to divert trains from one track to the other. Thus idle sections of track can be used to run fast trains around slower ones, and all trains are kept moving at nearly normal speed. The new crossovers are No. 20, good for 50 mph, and are so signaled.

At towns where considerable local switching is performed, two-mile sections of the two outside tracks were left in place as work sidings. House tracks and industrial tracks are connected to these sidings.

Seven interlockings, formerly all on the local control, and three remote control interlockings are now part of the CTC installation. The entire CTC is now controlled from two machines in the dispatcher's office at Erie, Pa.

WHERE YOU CAN FIND OUT MORE ABOUT THIS INSTALLATION:

Railway Age, Nov. 21, 1955, p. 28
Railway Signaling & Communications, Dec. 1955; March 1957

Places to Watch

NEW YORK CENTRAL CTC PROGRAM

From	To	Miles	Now Is	Will Be	Completion Date
Buffalo	Cleveland	163	4 trk*	2 trk double x-overs work sidings	1956
Toledo	Elkhart	133	4 & 3 trk	2 trk double x-overs work sidings	1957
Pana	Lenox	75	2 trk	1 trk sidings	1957
Syracuse	Buffalo	137	4 & 3 trk	2 trk double x-overs work sidings	1958
Boston	Albany	195	2 trk	1 trk sidings	1958
Rochester	Suspension Bridge	75	2 trk	1 trk sidings	1958
Berea	Toledo	90	4 & 3 trk	2 trk double x-overs work sidings	1958
Elkhart	Jackson	120	1 trk	1 trk sidings	1958
Sanford	Pana	85	2 trk	1 trk sidings	1958
Syracuse	Albany	135	4 & 3 trk	2 trk double x-overs work sidings	1959
Indianapolis	Terre Haute	65	2 trk	1 trk sidings	1959
Kensington	Jackson	188	2 trk	1 trk sidings	1959
Albany	Harmon	105	4 & 3 trk	2 trk double x-overs work sidings	1960
Elkhart	Englewood	88	4 & 3 trk	2 trk double x-overs work sidings	1960
Indianapolis	Bellefontaine	138	2 trk	1 trk sidings	1960
Jackson	Detroit	70	2 trk	1 trk sidings	1960
Weekawken	Albany	138	2 trk	1 trk sidings	1961
Lyons	Jersey Shore	169	1 trk sidings	1 trk sidings	1961
Ashtabula	Brookville	125	1 trk sidings	1 trk sidings	1961
Bellefontaine	Berea	126	2 trk	1 trk sidings	1961
Windsor	Fort Erie	220	2 trk	1 trk sidings	1961
Cincinnati	Indianapolis	103	2 trk	1 trk sidings	1962
Cincinnati	Bellefontaine	105	2 trk	1 trk sidings	1963

*Two tracks already removed

(Continued from page 16)
over the mail operation as a "package."

The plan promises, among other things, to greatly simplify bookkeeping and trim post office expenses. Too, the C&NW has retained its day train between the two major cities. The overnight "Nightingale" has been discontinued. Principal requirement imposed on the railroad is to meet post office delivery schedules.

Under the plan the road will handle mail several ways—in cars moving by time freight, by HPO units, by RPO car in the day train, and by highway truck. Bulk mail cars moving in freight service will be set out at specified points between Omaha and Minneapolis, with delivery times being meshed with the existing network of post office star routes.

The three specially designed highway post office trucks were placed in service in February. These vehicles parallel the C&NW rail route and will coordinate their movements with the RPO car and the "set out" storage cars. The trucks are 35 ft long, are equipped with sorting facilities and carry three clerks plus driver. They were manufactured by Crown Coach Company and were leased, with drivers, from Motor Express, Inc., Chicago.

One vehicle will make a through run from Minneapolis to Mankato, Minn., then "peddle" mail from Mankato to Sioux City. Another will peddle from St. Paul to Mankato. The third will operate on a reverse route from Mankato to St. Paul.

To meet post office schedules, C&NW night train No. 201 was eliminated and the schedule of day train No. 203 was advanced more than three hours to allow it to improve the timing of mail stops during the day.

The Omaha day train, which formerly left Minneapolis at 11:40 a.m., now leaves at 8 a.m. The return run also was altered slightly.

The entire plan was developed over a 6-month period.

Longest in the World

What is believed to be the longest bascule bridge in the world has been placed in service by the Baltimore & Ohio. The single-track bridge (above), carries B&O tracks across the Cuyahoga river in Cleveland. Because of heavy navigation on the river, the bridge was built vertically—that is, in the open position, from bottom of raised span upwards.

ICC Wants Port Rate Refunds Eliminated

The Interstate Commerce Commission has called upon the railroads to eliminate refund arrangements now maintained in connection with rates on coal moving to ports for transshipment. The arrangements involved are those applying on coal moving to lower Great Lakes ports and north Atlantic ports.

They resulted from the single-increase provisions in the general rate increase decisions of recent years. They provide for collection of higher transshipment rates in the first instance and for refund upon certification that the coal has moved a third time, i.e., beyond the destination ports of its lake or coastwise movement.

The commission's admonition came in a report which also condemned suspended tariffs whereby railroads serving lower Great Lakes ports undertook to deny refunds on lake-cargo coal which moved from upper lake ports by truck. The refund arrangement has been applicable to the trucked coal for the past four years.

"It appears to us," the commission said, "that the time has arrived when the rail carriers participating in such provisions must give serious consideration to their elimination, and to the establishment, as was the case for many years prior to 1937, of a just and reasonable rate structure by the maintenance of one set of proportional rates to the lower lake ports and to each of the North Atlantic ports. . . . We shall expect the carriers to give prompt consideration to this admonition."

Every Thirteenth Truck Weighs 50,000 lb or More

Each thousand trucks operating on main rural highways in 1955 included 75 vehicles weighing 50,000 lb or more. That was more than twice the comparable 1949 figure of 36 such vehicles.

This was shown by the latest survey of the Bureau of Public Roads, results of which were summarized by the ICC's Bureau of Transport Economics and Statistics in its "Transport Economics."

American University Plans Eleventh Rail Institute

The Eleventh Rail Transportation Institute of the American University, Washington, D.C., will be held there March 5-29.

Organized along lines of its predecessors, the institute will include 39 seminars, six field studies, and two dinner meetings. Speakers at the latter will be J. Monroe Johnson, executive assistant to the president, Atlantic Coast Line, and former member of the Interstate Commerce Commission; and Dr. J. H. Parmelee, consulting economist, Association of American Railroads. John W. Barriger, president of the Pittsburgh & Lake Erie, will address the closing session.

Financial

Applications

CHICAGO & NORTH WESTERN.—To assume liability for $1,335,000 of equipment trust certificates to finance in part the acquisition of 12 1,750-hp diesel-electric road switching locomotive units from Electro-Motive Division of General Motors Corporation. The estimated unit cost of the units is $159,860. The certificates would mature in 15 annual installments of $89,000 each, beginning March 15, 1958. They would be sold by competitive bids which would fix the interest rate.

GREAT NORTHERN.—To assume liability for $4,170,000 of equipment trust certificates to finance in part the acquisition of 25 diesel-electric locomotive units from Electro-Motive Division, General Motors Corporation, and 25 tank cars from ACF Industries, Inc. Twenty-three locomotive units would be of 1,750 hp, and their estimated unit cost is $177,000 for 12 and $190,000 for the other 11. The remaining two would be of 1,200 hp, and their estimated unit cost is $137,200. Estimated unit cost of the tank cars is $12,000. The certificates would mature in 30 semi-annual installments of $139,000 each, beginning next September 1.

NEW YORK CENTRAL.—To assume liability for $3,825,000 of equipment trust certificates to finance in part the acquisition of 17 1,750-hp diesel-electric locomotive units and 190 self-clearing 70-ton hopper cars. Twelve of the locomotive units would be purchased from General Motors Diesel Ltd.—10 at an estimated unit cost of $199,450 and two at $212,895. The other five would be purchased from Electro-Motive Division, General Motors Corporation, at an estimated unit cost of $183,841. The hopper cars would be purchased from Pullman-Standard Car Manufacturing Company at an estimated unit cost of $8,300. Estimated total cost of the equipment is $4,916,495. The certificates would mature in 15 annual installments of $255,000 each, beginning April 1, 1948. They would be sold by competitive bids which would fix the interest rate.

PENNSYLVANIA.—To assume liability for $4,950,000 of equipment trust certificates to finance in part the acquisition of 10 1,800-hp diesel-electric locomotive units from Alco Products, Inc., and 390 box cars from its own shops. Estimated total cost of the equipment is $6,197,500. The locomotive units are expected to cost $196,000 each, and the estimated unit cost of 171 of the box cars is $8,900. The other 219 would be equipped with DF loaders and their estimated unit cost is $12,400. The certificates would mature in 30 semiannual installments of $165,000 each, beginning next October 1. They would be sold by competitive bids which would fix the interest rate.

PITTSBURGH & LAKE ERIE.—To assume liability for $2,250,000 of equipment trust certificates to finance in part the purchase of 350 self-clearing 70-ton hopper cars from Bethlehem Steel Company. Estimated unit cost of the cars is $8,350 and their estimated total cost is $2,922,500. The certificates would mature in 15 annual installments of $150,000 each, beginning April 1, 1958. They would be sold by competitive bids which would fix the interest rate.

Dividends Declared

CHESAPEAKE & OHIO.—Common, $1, quarterly, payable March 20 to holders of record March 1; 3½% preferred, 87½¢, quarterly, payable May 1 to holders of record April 5.

CHICAGO, MILWAUKEE, ST. PAUL & PACIFIC.—Series A preferred, $1.25, quarterly, payable March 28, June 27, September 26 and November 27, to holders of record March 8, June 7, September 6 and November 8, respectively.

CHICAGO, ROCK ISLAND & PACIFIC.—67½¢, quarterly, payable March 30 to holders of record March 11.

DELAWARE & BOUND BROOK.—50¢, quarterly, paid February 20 to holders of record February 13.

ERIE & PITTSBURGH.—87½¢, quarterly, payable March 11 to holders of record February 28.

ILLINOIS CENTRAL.—$1, quarterly, payable April 1 to holders of record March 6.

KANSAS CITY SOUTHERN.—common, 75¢, quarterly, 25¢, extra, both payable March 15 to holders of record February 28; 4% preferred, 50¢, quarterly, payable April 15 to holders of record March 29.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—50¢, semiannual, 25¢, extra, both payable March 28 to holders of record March 8.

NORFOLK SOUTHERN.—30¢, payable March 15 to holders of record March 5.

NORTH PENNSYLVANIA.—$1, quarterly, paid last February 25 to holders of record February 18.

PEORIA & EASTERN.—$2.50, semiannual, payable April 1 to holders of record March 15.

PITTSBURGH, FT. WAYNE & CHICAGO.—common, $1.75, quarterly; 7% preferred, $1.75, quarterly, payable April 1 and 2, respectively, to holders of record March 8.

PITTSBURGH, YOUNGSTOWN & ASHTABULA.—7% preferred, $1.75, quarterly, payable March 1 to holders of record February 20.

SARATOGA & SCHENECTADY.—$1.50, paid January 15 to holders of record January 2.

VIRGINIAN.—$1, quarterly, payable March 14 to holders of record February 28.

WABASH.—preferred, $4.50, payable April 19 to holders of record March 29.

People in the News

BANGOR & AROOSTOOK.—John E. Hess, general counsel, Bangor, Me., appointed also vice-president—finance.

CANADIAN PACIFIC.— R. J. Culkin appointed assistant to manager, research, and **A. Lightbody** named assistant to manager, engineering, in the Department of Research, Montreal.

Three division managers in the Department of Public Relations appointed: **H. T. Coleman,** press relations; **W. T. McFarlane,** advertising, and **E. W. Scroggie,** display.

Thomas F. Turner, assistant secretary, Montreal, Que., appointed secretary, succeeding **Frederick Bramley,** who retired February 28.

I. Barry Scott, assistant public relations officer, Toronto, Ont., named special assistant to manager, Department of Public Relations, Montreal, assigned to special duties.

D. E. Sloan appointed manager, **Canadian Pacific Transport Company,** Winnipeg, Man., succeeding **R. E. H. Wilkes,** assigned special duties, Montreal.

DENVER & RIO GRANDE WESTERN.—B. W. Molis, signal engineer, appointed superintendent of signals and communications Denver, replacing **W. W. Pulham,** resigned to join the Western Union Telegraph Company, New York.

KANSAS CITY SOUTHERN.—D. F. Nicola appointed superintendent of terminals, Baton Rouge, La., with jurisdiction over the Baton Rouge terminal.

J. W. Thrasher named division engineer, Southern division and Port Arthur Terminal division, Shreveport, La., succeeding **R. E. McLaughlin,** transferred.

MILITARY TRAFFIC MANAGEMENT AGENCY.—Col. Ervin D. K. Hoehne appointed regional director, Central Traffic Region, St. Louis. Col. Hoehne commanded the Army Traffic Management Agency in Japan before his transfer to MTMA. **Col. Thomas R. Vague** appointed regional director, Southwestern Traffic Region, Dallas, Tex. Col. Vague served with the Joint Military Transportation Committee, Joint Chiefs of Staff, Washington, D.C., before his transfer to the MTMA.

MILWAUKEE.—Effective March 1, **Gilbert A. Henkens,** general agent, passenger department, Omaha, appointed district freight and passenger agent there.

MINNEAPOLIS & ST. LOUIS.—W. J. Weatherall, formerly sales engineer, Pacific Car & Foundry Company, Renton, Wash., appointed superintendent—car department, M&StL, Minneapolis.

Thomas F. Turner
CPR

W. J. Weatherall
M&StL

MISSOURI-KANSAS-TEXAS.—A. E. Smith, division engineer, Parsons, Kan., appointed assistant to chief engineer, maintenance of way and structures, Northern division, Dallas, Tex. **J. H. Hughes** and **V. T. Huckaby,** assistant division engineers, Parsons, named maintenance engineers, Dallas, reporting to Mr. Smith. **E. P. Kennedy,** division engineer, M-K-T of Texas, Waco, Tex., appointed assistant to chief engineer, maintenance of way and structures, Southern division, Dallas. **J. T. Hunter,** assistant division engineer, Waco, named maintenance engineer, Dallas, reporting to Mr. Kennedy.

MISSOURI PACIFIC.—L. W. Martin, road master mechanic, Eastern, Omaha and Northern Kansas divisions, Kansas City, Mo., appointed terminal master mechanic, Osawatomie Terminal, Osawatomie, Kan., succeeding **P. E. Latsha,** promoted (Railway Age, Feb. 11, p. 44). **E. E. Dent** named to replace Mr. Martin at Kansas City.

George W. Holmes, commerce counsel, St. Louis, appointed assistant general counsel there.

NICKEL PLATE.—Carl Heaton, assistant to chief mechanical officer, Cleveland, retired December 15, 1956, after more than 50 years' service.

NORFOLK & WESTERN.—C. P. Blair, assistant general manager, Roanoke, Va., appointed also general superintendent, Eastern General division, succeeding the late **H. B. Smith. W. S. Clement,** superintendent, Norfolk division, named assistant general superintendent, Eastern General division, a new position. **Richard F. Dunlap,** assistant superintendent, Norfolk Terminal, succeeds Mr. Clement as head of the Norfolk division. **B. H. Maben,** assistant superintendent, Norfolk division, transfers to the Radford division, succeeding **Harold E. Carter,** transferred to Norfolk Terminal. **B. H. Lester,** roadmaster, Portsmouth, Ohio, promoted to assistant superintendent, Norfolk division.

William T. Ross, superintendent of transportation, Roanoke, named general superintendent of transportation there, succeeding **K. V. Conrad,** who retired February 1. **Charles V. Holton,** assistant to superintendent transportation, appointed assistant superintendent transportation, succeeding **Hobart L. Scott,** promoted to superintendent transportation. **Leon Atkinson, Jr.,** supervisor of transportation, replaces Mr. Holton as assistant to superintendent transportation.

NORFOLK SOUTHERN—John H. Grotheer, general agent, Pittsburgh, Pa., transferred to Chicago, succeeding **Leo S. Johnson,** resigned to accept a position with another road. **Forrest D. McMillan,** commercial agent, Richmond, Va., promoted to general agent at Pittsburgh, succeeding Mr. Grotheer. **B. E. Geeslin,** commercial agent, Atlanta, Ga., promoted to general agent, Cincinnati, Ohio, succeeding the late **W. F. Mayhall.**

NORTHERN PACIFIC.—M. W. Scott, assistant superintendent, Livingston, Mont., appointed assistant to the general manager, St. Paul, to succeed **K. A. Box,** transferred to Seattle. Mr. Box succeeds **O. A. Hanson,** named manager of the **Camas Prairie,** replacing **I. A. Wolters,** who retired February 1.

Donald B. Stein
Reading

L. W. Albertson
SP&S

ONTARIO NORTHLAND TRANSPORTATION COMMISSION.—Trevor H. Lavery, assistant treasurer, North Bay, Ont., appointed treasurer, succeeding the late **E. R. Herbert. John Brisbane** named assistant treasurer.

RAILWAY EXPRESS AGENCY.—J. J. Callan appointed superintendent, Terminal division; **R. H. Peterson,** superintendent, Vehicle division; **Francis T. Halligan,** superintendent, Office division, and **L. W. Brew,** night superintendent, Terminal division, all at New York. **James J. Ross,** superintendent of organization, New York, appointed superintendent, Cleveland division.

Edward J. Bereford, director, labor relations research, New York, retired March 1.

READING—Donald B. Stein, assistant comptroller, Philadelphia, named comptroller, succeeding Frederick H. Frick, retired. **C. William Pleiss,** tax accountant, appointed assistant comptroller.

ROCK ISLAND.—W. P. Brown appointed general storekeeper, Silvis, Ill. **T. E. Conrad** named district storekeeper, El Reno, Okla.

SEATRAIN LINES.—S. T. Suratt, Jr., freight traffic manager, resigned February 6.

SOUTHERN.—Oliver H. Smart, assistant master mechanic, Spencer, N. C., appointed master mechanic, Chattanooga, Tenn., succeeding **Harry B. Rosenstein,** transferred to Columbia, S. C., replacing **Clarence A. Frick.** Mr. Frick transfers to Birmingham, Ala., succeeding **Manley H. Hammett,** named master mechanic at Spencer, N. C. **Archie G. Waldrupe,** assistant master mechanic, Atlanta, Ga., named master mechanic, Macon, Ga., succeeding **Wilbur D. Shults,** transferred to Alexandria, Va.

SPOKANE, PORTLAND & SEATTLE.—L. W. Albertson, comptroller, elected vice-president, succeeding the late **J. C. Moore. C. E. Broeder,** auditor miscellaneous accounts, elected to succeed Mr. Albertson.

VERMONT STATE RAILROADS ASSOCIATION.—Archibald M. Knowles, general counsel, Maine Central, named president of the association for 1957.

WABASH.—Carl H. Hartmann appointed general agent, freight department, New York, succeeding **Vincent G. Berdolt,** whose promotion to Eastern traffic manager, New York, was noted in Railway Age, Jan. 7, p. 40.

OBITUARY

George Dunglinson, Jr., 74, who retired in August 1953 as executive vice-president of the **Norfolk & Western,** died January 21 at his home in Roanoke, Va.

Ferdinand W. Kuhn, 63, vice-president of traffic of the **Monon,** died February 20.

LEIL

SEPTEMBER 14, 1902

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SWITCH LIGHTING A SUCCESS IN CHICAGO FREIGHT YARDS

NEW YORK, – September 14, 1902. In a detailed and illustrated description of the large freight yards of the Chicago Transfer & Clearing Company in our issue of March 14, mention was made of the intention to light the switch lamps of the yard by electricity. Some 400 of these switches are now so lighted, and we understand the system is proven satisfactory in every respect.

The cost of operation of these electric switch lamps in connection with a power plant used for other lighting purposes is comparatively small, and considerably cheaper than by oil when tank houses, the necessary labor and the constant care of the lamps are taken into consideration. The convenience, cleanliness and safety of the system make it very desirable. At night the moment it grows dark the entire yard may be lighted in the time required to throw four switches at the power station.

The scheme and the equipment comprise [illegible] system

Dateline 1902. Then, as now, American railroads were adopting new and better electrical devices for more efficient operation. Even at the turn of the century, Graybar had over 30 years experience in supplying "everything electrical" to America's expanding transportation industry.

Today, you'll find well over 100,000 different electrical items listed in Graybar catalogs. And your Railroad Pocket List gives the addresses of over 130 Graybar offices and warehouses in a pattern of locations that means prompt deliveries of products bearing the names of America's leading manufacturers to railroads from coast-to-coast.

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Supply Trade

J. W. Miller has been appointed sales representative of **Pullman-Standard Car Manufacturing Company.** Mr. Miller, formerly connected with P-S's sales and service engineering division, will operate out of the company's Birmingham, Ala., and Washington, D.C., sales offices.

R. W. Hopewell, manager of field service for **Gould-National Batteries, Inc.,** has been named manager of field engineering for the industrial division, at Trenton, N.J. **George R. Powers, Jr.,** specifications engineer and export manager, at New York, has been named St. Louis regional manager.

James H. Sutherland, midwestern regional sales manager of **SKF Industries, Inc.,** at Chicago, has been appointed director of sales at Philadelphia. **Edward H. Wagner,** manager of marketing, has succeeded him at Chicago.

Geoffrey W. Helm has been appointed vocational sales transportation department manager of **Remington Rand, Division of Sperry Rand Corporation,** handling all sales activities dealing with record problems in the transportation industry. He was formerly data processing manager of Pan American World Airways.

Walter S. Henry has joined the **General Railway Signal Company** as sales engineer in the Chicago office. He was formerly signal engineer of the Ft. Dodge, Des Moines & Southern. **Thomas P. Marple,** of the export department, has been appointed sales engineer at New York.

In addition to construction of a new metallurgical research laboratory in Canton, Ohio (Railway Age, Nov. 26, 1956), the **Timken Roller Bearing Company** plans to construct a modern two-story building there, which will house the physical, railroad research, electronic, photographic and lubrication laboratories. Construction is expected to begin in May.

Rust-Oleum Corporation has completed a half-million-dollar addition to its plant in Evanston, Ill., which marks the eighth company expansion project within the past 10 years. The firm said the plant expansion program just completed will double plant output.

OBITUARY

George E. Long, 70, who retired as chairman of the board of Koehring Company on January 1, died in a Milwaukee hospital January 21, after a short illness.

Frank A. Kriwitz, 76, retired traffic manager of Lehon Company, died January 25 at Middleton, Wis.

Edwards F. Schermerhorn, 77, retired manager of the insulated joint department of Rail Joint Company, died January 24 at his home in Brooklyn, N.Y.

John Markestein, 61, design engineer, Electro-Motive Division of General Motors Corporation, died February 13 at Westchester, Ill.

Charles E. Sampson, 60, southwestern manager of General Railway Signal Company at St. Louis, died February 15.

This is the fifteenth in a series of advertisements about the people of Standard.

He works in the future!

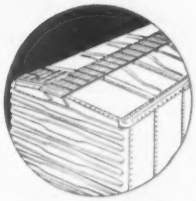
Meet Steve Fraenkel.

More correctly, Dr. Stephen J. Fraenkel, Director of Research and Development at Standard.

Dr. Fraenkel thinks and works in terms of the future. He heads a department dedicated to the search for new and improved products to serve Standard's customers.

Dr. Fraenkel spends what spare time he has enjoying suburban living with his charming family of four. He's an avid reader in the classics, history and world affairs, likes music and is an amateur photographer of no mean talent. But most of the time, Dr. Fraenkel is planning and working for tomorrow. He typifies Standard's spirit of service . . . even *greater* service to the railroads and the nation.

Improved Dreadnaught Ends



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9 out of 10 house cars now in operation on America's railroads are equipped with Standard Ends and Roofs.

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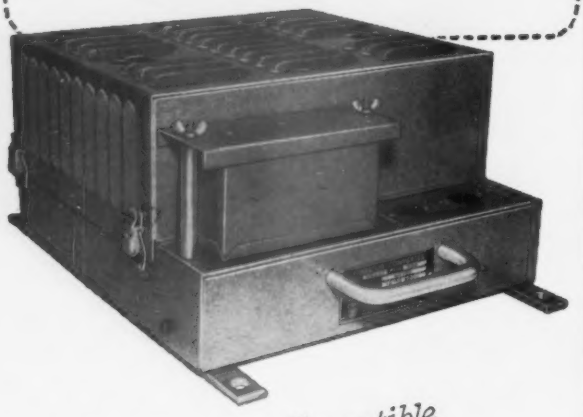

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Same rugged dependability as the nationally famous "3200 Series C-D RR Converter" but priced for low cost initial (single vibrator) installation. 50% longer vibrator life expectancy.

Write for Bulletin EB-3600, Cornell-Dubilier Electric Corp., Indianapolis, Indiana. Affiliated Member A.A.R.

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PLUG-IN CONVERSION

Field changeover like a vacuum tube. Kit can be plugged-in in minutes without tools.

COMPLETE UNIT

Available initially for dual vibrator operation factory equipped with automatic changeover feature.

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COMMUNICATION ENGINEER
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THIS MONEY-SAVING WAY...

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CONVEYCO **Mobil-Icer**

- Ices bunkers faster
- Breaks ice to four sizes
- Travels wherever needed
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SAFE . . . FAST MOBIL-ICER
breaks and delivers ice to car bunkers as fast as any man can feed 300 pound ice blocks to the breaking chamber (25 blocks per minute). Ice is fed to the Mobil-Icer in the vertical position the truck delivers it . . . no tilting, tipping, or special handling required. Automatic feed chute positions ice in breaking chamber. No danger to operator.

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for initial bunker icing or re-icing. Sizes are approximately 100 lb. chunks . . . 50 lb. chunks . . . 25 lb. chunks or coarse crushed ice. Operator can change sizes in an instant with hydraulic controls.

Delivers Ice to Four Hatches
when cars are coupled together. A telescopic stainless steel lined ice delivery chute carries ice to four bunker hatches without moving the Mobil-Icer.

Mobil-Icer Travels Highways
at truck speeds and goes wherever needed in rail yards, on sidings, to packing sheds, etc.

ICE BREAKER AN INTEGRAL PART OF ELEVATING SCREW
Rugged teeth on the bottom flights of the screw conveyor cut the ice into three large chunks. Smaller sizes are broken at the top as desired. Mobil-Icer operates from one power source, the truck engine. Maintenance, operating expense and initial price are low.

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with Dictionary of Air Brake Terms

by C. M. DRENNAN

A teacher of air brakes to railroad men since 1908; retired supervisor of training, Westinghouse Air Brake Co.

This complete introduction to the study of air brakes contains 70 of the famous "chalk talk" diagrams which the author has used successfully for years. Its three sections include: Section 1—friction and braking ratio; freight and passenger train brake control. Section 2—description, function and operation of pistons, valves, electric controls and other components. Section 3—air brake dictionary covering words, terms and phrases, many of which have specific air brake meanings. Following each chapter is a quiz to test the student's absorption of the lesson. A practical book for practical men. 243 pages; approximately 8 by 11 inches; cloth bound.

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Mr. Genet Trots Out a Spook

Arthur Genet, head of the Greyhound Bus System, is an able sales strategist. He has again broken into print with the prediction that the buses count on taking over all the railroad passenger business, not already laid claim to by private automobiles and the airlines.

By reiterating this prediction, Mr. Genet is making two-edged propaganda. For one thing, he obviously hopes to buoy up the spirits of bus people—who cannot be very happy about the way their traffic has been slipping away.

Traffic It Pays to Lose

Indeed, the traffic situation of the bus lines has, in one respect, been considerably worse than that of the railroads. There have been trains running for years on end, with not enough passengers to pay the trainmen's wages. When railroads pull off these trains, and thereby drop a few passenger-miles, they are not losers. Instead they are money in pocket. But bus lines cannot similarly improve their profit position as their traffic falls off, because the bus operators have never made standard practice of running buses for years where revenues have fallen far below operating costs.

So Mr. Genet can cheer up the bus operators, and thus make them more aggressive, if he can persuade them that a lot of new traffic is coming their way, practically without effort—diverted from the railroads. This is one edge of the Genet propaganda. The other edge of it is his plain desire to dishearten the railroads about the future of their passenger business.

If he can succeed in undermining the railroads' morale—persuading them that they should get out of the passenger business as fast as they can—then his job as a salesman for bus travel will be very easy. He can pick up a lot of traffic—not by the hard way of giving improved service and greater economy—but simply because of the disappearance of his big competitor for middle-distance traffic.

In addition, if Mr. Genet could scare the railroads by waving this jack-o-lantern at them, he would provide himself with the further advantage of being able to raise his rates with little risk of traffic loss.

Mr. Genet is a very smart man, and an amiable one too. It was a great loss to the railroad industry when he transferred his allegiance to highway transportation. But, in his campaign to scare the railroads out of the passenger business, we believe he has underestimated the intelligence and stamina of his former colleagues on the railroads.

Wherever there are trains operating with only a busload of passengers or less—such traffic it would pay the railroads to relinquish to Mr. Genet; and they should do it. But between population centers where riders run into the hundreds or thousands daily—No, no, Mr. Genet. The railroads can handle this business faster and more economically, and in more comfort and safety than buses can, and we believe they should give an all-out demonstration of this fact.

THIS RELATES TO:

- **1—Challenging competition**
- **2—Holding to high service standards**
- **3—Increasing internal strength**
- **4—Getting a higher level of earnings**
- **5—Improving tools and methods**
- **6—Seeking a friendlier environment**

Economically, the railroads and the buses should be allies—not competitors. The buses should handle the traffic which is available only in busload quantities. The railroads should go after the trainload volume, and the "intermediate" quantities suited to self-propelled cars. Bus and rail transportation should "feed" each other—to their mutual profit, and to the great advantage of the traveling public.

But that isn't what Mr. Genet wants. He proposes to do a wholesale business, but using retail methods and retail prices.

Power of the Unions

The only people that can really jeopardize the railroads' ability to haul passengers in quantities more economically than the buses, are the railway unions.

With a "day" of unnatural shortness and excessive crews, the unions can make crew cost per passenger-mile by rail as high as, or higher than, by bus. This is the real menace to railroad passenger service—and we're sufficient optimists to believe that railway union people will recognize the danger before it is too late.

But Mr. Genet's bogeyman is strictly synthetic. We hope the railroads will respond to his challenge by giving him additional concrete evidence of the economic facts of transportation in quantity. That is, by zipping up their service in some of the heavy-travel areas where they have, up to now, been pretty easy-going. There are places where they are letting buses take more of the heavy volume business than they have any economic right to.

"He Builded Better Than He Knew"*

*Ralph Waldo Emerson's "The Problem"

George Stephenson:

George Stephenson's contract for the world's first public railroad was won, in 1829, on the basis of quality and integrity of craftsmanship. Stephenson went on to establish nine major railroads, before his death in 1848. Some of the standards laid down by him, over one hundred years ago, are still in use today.

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